

ANNUAL STATISTICAL REPORT

OF THE

American Iron and Steel
Institute

For 1920



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AMERICAN IRON AND STEEL INSTITUTE

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LETTER OF TRANSMITTAL.

HON. ELBERT H. GARY, PRESIDENT,

American Iron and Steel Institute, New York City.

DEAR SIR: Herewith is submitted the Ninth Annual Statistical Report of the American Iron and Steel Institute, containing the statistics of the iron and steel and allied industries of the United States and Canada for the year 1920 and preceding years.

As in former years Special Statistical Bulletins have been published as soon as the receipt of complete statistics made it possible. In 1921 Statistical Bulletins were issued as follows:

No. 1—Production of pig iron in the United States in 1920; issued March 10, 1921.

No. 2—Production of rails in the United States in 1920; issued March 28, 1921.

No. 3—Production of steel ingots and castings, finished forms of rolled iron and steel, and miscellaneous iron and steel products in the United States in 1920; issued June 10, 1921.

No. 4—Production of pig iron in the United States in the first six months of 1921; issued August 6, 1921.

For additional statistical information not gathered by the Institute but incorporated in the Report we are indebted to the Director of the Bureau of Foreign and Domestic Commerce; Hon. George Otis Smith, Director of the United States Geological Survey; E. H. Alden, Vice President of the Norfolk and Western Railway Company; to editors of *The Iron Age*, *Iron Trade Review*, *American Metal Market*, *Steel and Iron*, and the *Connellsville Courier*; Harrison I. Potts, Secretary of the *Iron Merchants' Association*, Philadelphia; Edward L. Hand

& Co., of Philadelphia; W. I. Miller, Secretary and Treasurer of the Pittsburgh Forge and Iron Co., Pittsburgh.

For Canadian statistics relating to coal, coke and iron ore we are indebted to Hon. John McLeish, B. A., Director of Mines, Department of Mines, Ottawa. For prices of pig iron and rails in England we are indebted to the Iron and Coal Trades Review, London.

The work of compilation of the data contained in this Report has been in charge of Mr. William G. Gray.

HOWARD H. COOK,
Assistant Secretary.

NEW YORK, AUGUST 31, 1921.

SUMMARY OF IRON AND STEEL PRODUCTION.

PRODUCTION OF LEADING ARTICLES OF IRON AND STEEL.

Products.	1919.	1920.	Increase.	Per cent.
Pig iron.				
Basic.	14,494,131	16,737,722	2,243,591	15.48
Bessemer and low-phos.	9,975,934	12,062,084	2,086,150	20.91
Foundry and ferro-silicon. .	4,916,758	5,957,782	1,041,024	21.17
Malleable.	1,009,049	1,310,951	301,902	29.92
Forge.	271,286	318,048	46,762	17.24
Spiegeleisen.	84,246	111,449	27,203	32.29
Ferro-manganese.	185,357	295,447	110,090	59.39
All other grades.	78,603	132,504	53,901	68.57
Total pig iron. Gross tons.	31,015,364	36,925,987	5,910,623	19.06
Steel ingots and castings.				
Open-hearth.	26,948,694	32,671,895	5,723,201	21.24
Bessemer.	7,271,562	8,883,087	1,611,525	22.16
Crucible.	63,572	72,265	8,693	13.67
Electric and all other steel.	387,404	505,687	118,283	30.53
Total steel. . Gross tons.	34,671,232	42,132,934	7,461,702	21.52
Rolled iron and steel.				
Rails.	2,203,843	2,604,116	400,273	18.16
Plates and sheets.	7,372,814	9,337,680	1,964,866	26.65
Nail and spike plate.	12,832	20,577	7,745	60.36
Wire rods.	2,538,476	3,136,907	598,431	23.57
Structural shapes.	2,614,036	3,306,748	692,712	26.50
Merchant bars.	4,391,624	6,130,240	1,738,616	39.59
Bars for concrete work.	419,021	572,445	153,424	36.61
Skelp, flue, etc.	2,555,778	3,220,289	664,511	26.00
Hoops.	233,336	333,440	100,104	42.90
Bands and cotton-ties.	352,172	388,862	36,690	10.42
Long angle splice bars, etc.	434,008	575,830	141,822	32.68
Rolled sheet piling.	17,811	20,716	2,905	16.31
Railroad ties.	16,645	26,310	9,665	58.07
Rolled forging billets.	359,582	447,334	87,752	24.40
Blooms, billets, etc., export.	92,143	136,457	44,314	48.09
All other finished rolled.	1,487,423	2,089,912	602,489	40.51
Total. Gross tons.	25,101,544	32,347,863	7,246,319	28.87

PRODUCTION OF MISCELLANEOUS IRON AND STEEL PRODUCTS.

Products.	1919.	1920.	Increase.	Per cent.
Tin and terne plates. .Pounds.	2,578,011,487	3,218,177,730	640,166,243	24.83
*Galvanized sheets. .Pounds.	1,641,070,432	2,015,255,681	374,185,249	22.80
†Rail joints and fastenings. .	378,083	526,752	148,669	39.32
Cut nails—kegs of 100 lbs. .	394,477	844,583	450,106	114.10
Wire nails—kegs of 100 lbs. .	13,094,221	16,449,506	3,355,285	25.62
†Wrought pipe.	2,374,931	3,002,725	627,794	26.43
†Seamless steel tubes.	197,369	291,570	94,201	47.73
Cast iron pipe, net tons. . . .	710,081	886,515	176,434	24.85
†Hammered charcoal blooms. .	32,237	62,624	30,387	94.26
†Forged iron and steel.	534,346	540,104	5,758	1.08

* Includes articles formed or stamped from iron or steel black plates or black sheets and galvanized after the completion of the forming process. † Gross tons.

SUMMARY OF MISCELLANEOUS STATISTICS.

Products.	1919.	1920.	Increase.	Per cent.
Iron ore (gross tons):				
Shipments, Lake Superior. .	*48,546,651	60,411,572	11,864,921	24.44
Total production.	60,965,418	67,604,465	6,639,047	10.89
Imports.	476,461	1,273,456	796,995	167.27
Exports.	996,569	1,145,037	148,468	14.90
Coal (net tons):				
Production, bituminous. . .	465,860,058	†556,563,000	90,702,942	19.47
Production, anthracite. . . .	88,092,201	†89,100,000	1,007,799	1.14
Total production.	553,952,259	†645,663,000	91,710,741	16.56
†Imports.	977,115	1,139,944	162,829	16.66
†Exports.	22,401,905	39,215,030	16,813,125	75.05
Coke (net tons):				
Total production.	†44,793,542	†51,888,000	7,094,458	15.84
†Imports.	14,720	36,735	22,015	149.56
†Exports.	640,139	821,252	181,113	28.29
Shipments, Connellsville. . .	10,254,640	10,750,227	495,587	4.83
Shipments, Pocahontas. . . .	702,891	541,605	||161,286	||22.95

* Revised. † Estimated by the United States Geological Survey.
 † Gross tons. || Decrease.

PIG IRON.

Classification.—All pig iron and ferro-alloys are included, whether made in blast furnaces or in electric furnaces. Pig iron made with bituminous coal is included under coke pig iron. Pig iron made with mixed anthracite and coke is included in anthracite pig iron. Pig iron made with electricity is included in coke pig iron. Low-phosphorus pig iron, that is, iron running under 0.04 in phosphorus, is included in Bessemer pig iron. Pig iron containing from 0.04 to 0.10 per cent. of phosphorus is classified as Bessemer. The figures for 1913 and subsequent years include under basic iron a small quantity of charcoal iron of basic grade. In 1912 and prior years charcoal pig iron of basic quality was not included in the basic production. Nearly all the charcoal iron is classed as foundry pig iron. Ferro-silicon is included in foundry pig iron. Pig iron containing 7 per cent. or over of silicon is classified as ferro-silicon. Under "all other grades" are included white and mottled iron, direct castings, and miscellaneous ferro-alloys. Where not separately stated ferro-manganese and spiegeleisen are included in "all other."

PRODUCTION OF ALL KINDS OF PIG IRON.

TOTAL PRODUCTION OF PIG IRON, 1891-1920.

Years.	Gross tons	Years.	Gross tons.	Years.	Gross tons.
1891	8,279,870	1901	15,878,354	1911	23,649,547
1892	9,157,000	1902	17,821,307	1912	29,726,937
1893	7,124,502	1903	18,009,252	1913	30,966,152
1894	6,657,388	1904	16,497,033	1914	23,332,244
1895	9,446,308	1905	22,992,380	1915	29,916,213
1896	8,623,127	1906	25,307,191	1916	39,434,797
1897	9,652,680	1907	25,781,361	1917	38,621,216
1898	11,773,934	1908	15,936,018	1918	39,054,644
1899	13,620,703	1909	25,795,471	1919	31,015,364
1900	13,789,242	1910	27,303,567	1920	36,925,987

PRODUCTION OF PIG IRON BY STATES, 1916-1920.

States.	1916.	1917.	1918.	1919.	1920.
Maine, Mass., Conn....	5,719	10,527	12,485	13,678	10,281
New York, New Jersey..	2,352,535	2,417,527	2,871,118	2,070,288	2,601,134
Pennsylvania.....	16,506,284	15,539,728	15,198,271	12,276,585	13,983,134
Maryland.....	501,452	422,212	373,817	244,002	523,733
Virginia.....	399,885	520,311	513,737	319,409	429,302
Alabama.....	2,762,885	2,953,705	2,587,852	2,130,092	2,392,962
W. Va., Ga., Ky., Texas.	554,590	561,951	594,675	413,091	772,379
Tennessee.....	355,374	369,951	369,822	190,514	283,207
Ohio.....	8,602,895	8,518,603	8,764,132	7,102,627	8,533,470
Illinois.....	3,922,512	3,456,915	3,440,307	2,558,213	3,280,875
Indiana, Michigan.....	2,221,708	2,657,503	3,073,599	2,715,659	2,939,521
Wisconsin, Minnesota..	811,325	738,541	750,366	605,619	711,405
Mo., Iowa, Col., Mont., Wash., Oregon, Cal. }	437,633	453,742	504,463	375,587	464,584
Total...Gross tons.	39,434,797	38,621,216	39,054,644	31,015,364	36,925,987

PRODUCTION OF PIG IRON BY STATES, 1919-1920.

States.	Production—Gross tons.					
	1920.	Per cent.	1919.	Per cent.	Increase.	Per cent. increase.
Pennsylvania.....	13,983,134	37.87	12,276,585	39.58	1,706,549	13.90
Ohio.....	8,533,470	23.11	7,102,627	22.90	1,430,843	20.15
Illinois.....	3,280,875	8.88	2,558,213	8.25	722,662	28.25
Indiana, Michigan.....	2,939,521	7.96	2,715,659	8.76	223,862	8.24
New York, New Jersey	2,601,134	7.04	2,070,288	6.68	530,846	25.64
Alabama.....	2,392,962	6.48	2,130,092	6.87	262,870	12.34
W. Va., Ky., Texas....	772,379	2.09	413,091	1.33	359,288	86.98
Wisconsin, Minnesota..	711,405	1.93	605,619	1.95	105,786	17.47
Maryland.....	523,733	1.42	244,002	.79	279,731	114.64
Mo., Iowa, Col., Mont., Wash., Oregon, Cal. }	464,584	1.26	375,587	1.21	88,997	23.70
Virginia.....	429,302	1.16	319,409	1.03	109,893	34.41
Tennessee.....	283,207	.77	190,514	.61	92,693	48.65
Maine, Mass., Conn....	10,281	.03	13,678	.04	*3,397	*24.84
Total.....	36,925,987	100.00	31,015,364	100.00	5,910,623	19.06

* Decrease.

In 1920, 29.04 per cent. of the pig iron made was made for sale, as compared with 28.02 per cent. in 1919 and 27.6 per cent. in 1918. Of the pig iron made for sale in 1920, 53.7 per cent. was foundry pig iron, as compared with 55.4 per cent. in 1919 and 46.1 per cent. in 1918.

PIG IRON MADE FOR SALE OR FOR USE OF MAKERS IN 1920.

Grades.	For sale.	Formaker's use.	Total. Gross tons.
Basic.....	2,150,523	14,587,199	16,737,722
Bessemer and low-phosphorus.....	1,094,256	10,967,828	12,062,084
Foundry, including ferro-silicon.....	5,760,822	196,960	5,957,782
Malleable.....	1,284,491	26,460	1,310,951
Forge or mill.....	151,999	166,049	318,048
Ferro-manganese.....	133,766	161,681	295,447
Spiegeleisen.....	72,371	39,078	111,449
All other grades.....	76,070	56,434	132,504
Total.....Gross tons.	10,724,298	26,201,689	36,925,987

PIG IRON MADE FOR SALE BY GRADES IN 1920.

States.	Basic.	Bessemer.	Foundry.	Malleable.	Forge.	All other.	Total. Gross tons.
Maine, Mass., Conn.....			10,093			46	10,139
N.Y., N. J., Md.....	195,795	101,362	829,236	200,909	7,367	16,473	1,351,142
Pennsylvania	752,314	731,099	1,050,706	109,760	71,708	177,689	2,893,216
Va., W. Va., Ala.....	271,840	711	1,642,920		18,409	32,595	1,966,475
Ky., Tenn.....	9,809	57,861	305,369	6,986	2,366	12,080	394,471
Ohio.....	589,180	88,060	1,012,444	449,228	52,149	9,219	2,200,280
Indiana, Ill.....	287,304	115,163	182,276	324,312		14,285	923,340
Mich., Wis., Minn., Mo., Iowa, Montana, Col., Wash.}	44,281		727,778	193,356		19,820	985,235
Total....	2,150,523	1,094,256	5,760,822	1,284,491	151,999	282,207	10,724,298

PIG IRON MADE FOR SALE BY GRADES, 1913-1920.

Years.	Basic.	Bessemer.	Foundry.	Malleable.	Forge.	All other.	Total. Gross tons.
1913.....	1,909,279	1,203,680	5,084,952	989,241	238,361	98,372	9,523,885
1914.....	1,479,721	527,905	4,393,089	671,771	196,058	94,436	7,362,980
1915.....	1,747,265	871,730	4,801,711	829,921	174,355	158,025	8,583,007
1916.....	2,476,677	1,976,863	5,473,196	921,486	144,615	260,480	11,253,317
1917.....	2,614,875	2,406,742	5,186,498	1,014,025	128,061	300,131	11,650,332
1918.....	2,401,476	1,703,801	4,962,155	1,117,914	197,654	385,540	10,768,540
1919.....	1,613,762	1,018,459	4,817,234	999,228	100,433	141,111	8,690,227
1920.....	2,150,523	1,094,256	5,760,822	1,284,491	151,999	282,207	10,724,298

PRODUCTION OF PIG IRON BY GRADES.

PRODUCTION OF PIG IRON BY GRADES, 1905-1920.

Years.	Basic.	Bessemer.	Foundry.	Malleable.	Forge.	All other.	Total. Gross tons.
1905.	4,105,179	12,407,116	4,758,038	635,236	727,817	358,994	22,992,380
1906.	5,018,674	13,840,518	4,773,011	699,701	597,420	377,867	25,307,191
1907.	5,375,219	13,231,620	5,151,209	920,290	683,167	419,856	25,781,361
1908.	4,010,144	7,216,976	3,637,622	414,957	457,164	199,155	15,936,018
1909.	8,250,225	10,557,370	5,322,415	658,048	725,624	281,789	25,795,471
1910.	9,084,608	11,245,642	5,260,447	843,123	564,157	305,574	27,303,567
1911.	8,520,020	9,409,303	4,468,940	612,533	408,841	229,910	23,649,547
1912.	11,417,886	11,664,015	5,073,873	825,643	469,183	276,337	29,726,937
1913.	12,536,693	11,590,113	5,220,343	993,736	324,407	300,860	30,966,152
1914.	9,670,687	7,859,127	4,533,254	671,771	361,651	235,754	23,332,244
1915.	13,093,214	10,523,306	4,843,899	829,921	316,214	309,659	29,916,213
1916.	17,684,087	14,422,457	5,553,644	921,486	348,344	504,779	39,434,797
1917.	17,671,662	13,714,732	5,328,258	1,015,579	345,707	545,278	38,621,216
1918.	18,646,174	13,024,966	5,145,260	1,117,914	393,932	726,398	39,054,644
1919.	14,494,131	9,975,934	4,916,758	1,009,049	271,286	348,206	31,015,364
1920.	16,737,722	12,062,084	5,957,782	1,310,951	318,048	539,400	36,925,987

PRODUCTION OF PIG IRON BY GRADES, 1919-1920, SHOWING INCREASE BY GRADES.

Grades.	1920.	Per cent.	1919.	Per cent.	Increase.	Per cent.
Basic.....	16,737,722	45.33	14,494,131	46.73	2,243,591	15.48
Bessemer and low phosphorus.....	12,062,084	32.67	9,975,934	32.17	2,086,150	20.91
Foundry and ferro- silicon.....	5,957,782	16.13	4,916,758	15.85	1,041,024	21.17
Malleable.....	1,310,951	3.55	1,009,049	3.25	301,902	29.92
Forge.....	318,048	.86	271,286	.88	46,762	17.24
Spiegeleisen.....	111,449	.30	84,246	.27	27,203	32.29
Ferro-manganese.....	295,447	.80	185,357	.60	110,090	59.39
All other.....	132,504	.36	78,603	.25	53,901	68.57
Total.....	36,925,987	100.00	31,015,364	100.00	5,910,623	19.06

PRODUCTION OF BASIC PIG IRON BY STATES.

States.	1916.	1917.	1918.	1919.	1920.
Pennsylvania.....	9,384,270	8,349,395	8,324,980	6,627,212	7,296,255
Indiana, Illinois.....	2,867,701	3,076,815	3,633,317	3,069,194	3,454,646
Ohio.....	2,456,876	2,987,380	3,360,681	2,541,969	2,948,311
New York, New Jersey	1,205,840	1,162,653	1,346,396	736,325	1,137,304
Alabama.....	1,174,571	1,475,821	1,235,077	965,265	1,091,706
Mich., Wis., Minn., Mo., Col., Cal., Wash. ...	581,490	575,957	649,348	452,333	502,508
Virginia, West Va., Ky.	13,339	43,641	96,375	101,833	306,992
Total.. Gross tons.	17,684,087	17,671,662	18,646,174	14,494,131	16,737,722

PRODUCTION OF BESSEMER PIG IRON BY STATES.

States.	1916.	1917.	1918.	1919.	1920.
Pennsylvania.....	5,533,007	5,685,017	5,310,024	4,302,171	4,955,766
Ohio	4,933,231	4,310,774	4,245,001	3,367,336	3,978,787
Ind., Ill., Minn., Wis., Col.	2,537,616	2,362,035	2,191,329	1,486,367	1,819,187
Maryland.....	468,995	390,568	366,074	240,953	521,733
W. Va., Ky., Tenn., Ala.	496,588	487,509	507,922	244,667	411,523
New York, New Jersey.	453,020	478,829	404,616	334,440	375,088
Total...Gross tons...	14,422,457	13,714,732	13,024,966	9,975,934	12,062,084
Total Bessemer.....	13,921,244	13,137,793	12,436,374	9,641,775	11,693,269
Total low-phosphorus	501,213	576,939	588,592	334,159	368,815

PRODUCTION OF FOUNDRY PIG IRON BY STATES.

States.	1916.	1917.	1918.	1919.	1920.
Maine, Mass., Conn...	5,719	10,527	12,300	13,606	10,235
New York, New Jersey.	525,602	588,489	828,824	831,524	854,768
Pennsylvania.....	987,214	936,970	785,844	850,882	1,071,374
Maryland, Va., W. Va.	389,218	521,691	489,931	342,972	437,002
Georgia, Kentucky ...	84,080	62,857	62,115	71,140	71,979
Tennessee, Texas.....	305,247	335,165	323,656	168,764	240,634
Alabama.....	1,493,373	1,361,851	1,169,123	1,083,389	1,226,854
Ohio.....	787,197	651,411	660,201	749,136	1,016,911
Indiana, Illinois.....	152,038	90,973	53,666	108,122	191,448
Michigan.....	379,997	374,995	356,069	329,624	419,686
Wisconsin.....	311,447	272,745	276,198	250,358	335,152
Minnesota, Mo., Iowa, } Col., Cal., Ore., Wash. }	132,512	120,584	127,333	117,241	81,739
Total...Gross tons.	5,553,644	5,328,258	5,145,260	4,916,758	5,957,782
Total foundry.....	5,319,284	5,085,796	4,847,320	4,735,007	5,722,526
Total ferro-silicon...	234,360	242,462	297,940	181,751	235,256

PRODUCTION OF MALLEABLE PIG IRON BY STATES.

States.	1916.	1917.	1918.	1919.	1920.
New York, New Jersey.....	150,309	149,375	198,631	147,605	204,488
Pennsylvania	111,404	76,227	118,895	126,933	109,700
Kentucky, Ohio.....	286,180	430,416	388,512	334,602	456,214
Indiana, Illinois.....	241,813	359,561	411,876	399,909	540,549
Mich., Wis., Minn., Missouri.	131,780				
Total.....Gross tons.	921,486	1,015,579	1,117,914	1,009,049	1,310,951

PRODUCTION OF FORGE PIG IRON BY STATES.

States.	1916.	1917.	1918.	1919.	1920.
New York, New Jersey.....	9,892	6,429	36,732	8,931	7,367
Pennsylvania.....	145,888	146,659	180,418	146,923	168,436
Virginia.....	11,739	2,501	841	105	3,076
Tennessee, Kentucky.....	2,954	3,223	4,694		
Alabama.....	34,950	58,880	73,293	17,070	17,699
Ohio.....	142,921	128,015	97,954	98,257	121,470
Total.....Gross tons.	348,344	345,707	393,932	271,286	318,048

PRODUCTION OF MISCELLANEOUS GRADES OF PIG IRON.*

States.	1916.	1917.	1918.	1919.	1920.
Conn., New York, New Jersey.	5,372	18,910	16,242	8,708	16,462
Pennsylvania, Maryland.....	20,225	18,712	20,825	15,257	25,430
Va., W. Va., Ky., Tenn., Ga., Ala.	51,337	36,433	47,121	30,628	48,010
Ohio.....	9,267	10,607	11,783	11,327	18,763
Indiana, Illinois.....	2,421	7,102	10,447	9,897	14,257
Mich., Wis., Minn., Mo., Iowa, } Col., Wash., Cal..... }	623	404	3,100	2,786	9,582
Total.....Gross tons.	89,245	92,168	109,518	78,603	132,504

* Spiegeleisen and ferro-manganese not included.

PRODUCTION AND CONSUMPTION OF SPIEGELEISEN AND FERRO-MANGANESE FROM 1904 TO 1920.

Calendar years.	Spiegeleisen—Gross tons.			Ferro-manganese—Gross tons.		
	Production.	Add imports for consumption.	Approximate consumption.	Production.	Add imports for consumption.	Approximate consumption.
1904.....	162,370	4,623	166,993	57,076	21,814	78,890
1905.....	227,797	55,457	283,254	62,186	52,841	115,027
1906.....	244,980	103,267	348,247	55,520	84,359	139,879
1907.....	283,430	48,995	332,425	55,918	87,400	143,318
1908.....	111,376	4,579	115,955	40,642	44,624	85,266
1909.....	142,831	16,921	159,752	82,209	88,934	171,143
1910.....	153,055	25,383	178,438	71,376	114,278	185,654
1911.....	110,236	20,970	131,206	74,482	80,263	154,745
1912.....	96,346	1,015	97,361	125,378	99,137	224,515
1913.....	110,338	77	110,415	119,495	128,070	247,565
1914.....	79,935	2,870	82,805	106,083	82,997	189,080
1915.....	97,885	200	98,085	149,521	55,263	204,784
1916.....	194,002	.....	194,002	221,532	90,928	312,460
1917.....	192,985	3,968	196,953	260,125	41,969	*299,694
1918.....	283,853	1,969	285,822	333,027	26,906	*356,356
1919.....	84,246	27	84,273	185,357	33,022	*215,380
1920.....	111,449	5,234	116,683	295,447	59,254	*351,247

* 2,400 tons of ferro-manganese exported in the last 6 months of 1917, 3,577 tons in the 12 months of 1918, 2,999 tons in the 12 months of 1919, and 3,454 tons in the 12 months of 1920 are deducted.

PRODUCTION OF PIG IRON BY FUELS.

PRODUCTION OF PIG IRON BY FUELS, GROSS TONS, 1854-1920.

Years.	Anthracite.	Charcoal.	Bituminous.	Total.
1854.....	303,067	305,623	48,647	657,337
1855.....	340,952	303,502	55,705	700,159
1856.....	395,637	330,777	62,101	788,515
1857.....	348,558	294,929	69,153	712,640
1858.....	322,705	254,744	52,099	629,548
1859.....	421,201	253,608	75,751	750,560
1860.....	463,581	248,510	109,132	821,223
1861.....	365,383	174,355	113,426	653,164
1862.....	419,924	166,661	116,685	703,270
1863.....	515,748	189,290	141,037	846,075
1864.....	610,730	215,940	187,612	1,014,282
1865.....	428,177	234,234	169,359	831,770
1866.....	669,078	296,946	239,639	1,205,663
1867.....	713,070	307,447	284,506	1,305,023
1868.....	797,322	330,357	303,571	1,431,250
1869.....	867,098	350,134	494,055	1,711,287
1870.....	830,357	325,893	508,929	1,665,179
1871.....	854,114	343,750	508,929	1,706,793
1872.....	1,223,047	446,953	878,713	2,548,713
1873.....	1,172,102	515,732	873,129	2,560,963
1874.....	1,073,343	514,783	813,136	2,401,262
1875.....	810,755	366,956	846,022	2,023,733
1876.....	709,445	275,579	883,937	1,868,961
1877.....	834,640	283,789	948,165	2,066,594
1878.....	975,777	261,963	1,063,475	2,301,215
1879.....	1,136,629	320,422	1,284,802	2,741,853
1880.....	1,613,974	479,963	1,741,254	3,835,191
1881.....	1,548,627	570,391	2,025,236	4,144,254
1882.....	1,823,338	623,130	2,176,855	4,623,323
1883.....	1,683,568	510,469	2,401,473	4,595,510
1884.....	1,416,476	409,301	2,272,091	4,097,868
1885.....	1,298,562	357,004	2,388,960	4,044,526
1886.....	1,874,640	410,319	3,398,370	5,683,329
1887.....	2,087,847	516,234	3,813,067	6,417,148
1888.....	1,719,401	534,633	4,235,704	6,489,738
1889.....	1,714,602	575,268	5,313,772	7,603,642
1890.....	2,186,411	628,145	6,388,147	9,202,703
1891.....	1,866,108	576,964	5,836,798	8,279,870
1892.....	1,797,113	537,621	6,822,266	9,157,000
1893.....	1,347,529	386,789	5,390,184	7,124,502
1894.....	914,742	222,422	5,520,224	6,657,388
1895.....	1,270,899	225,341	7,950,068	9,446,308
1896.....	1,146,412	310,244	7,166,471	8,623,127
1897.....	932,777	255,211	8,464,692	9,652,680
1898.....	1,203,273	296,750	10,273,911	11,773,934
1899.....	1,599,552	284,766	11,736,385	13,620,703

Years.	Anthracite.	Charcoal.	Bituminous.	Total.
1900.....	1,677,048	384,482	11,727,712	13,789,242
1901.....	1,712,527	383,441	13,782,386	15,878,354
1902.....	1,115,247	390,169	16,315,891	17,821,307
1903.....	1,911,347	505,684	15,592,221	18,009,252
1904.....	1,228,140	337,529	14,931,364	16,497,033
1905.....	1,674,515	352,928	20,964,937	22,992,380
1906.....	1,560,686	433,007	23,313,498	25,307,191
1907.....	1,371,554	437,397	23,972,410	25,781,361
1908.....	355,009	249,146	15,331,863	15,936,018
1909.....	698,431	376,003	24,721,037	25,795,471
1910.....	649,082	396,507	26,257,978	27,303,567
1911.....	229,575	278,676	23,141,296	23,649,547
1912.....	247,179	347,025	29,132,733	29,726,937
1913.....	300,041	339,981	30,326,130	30,966,152
1914.....	91,464	263,924	22,976,856	23,332,244
1915.....	84,753	296,152	29,535,308	29,916,213
1916.....	217,788	372,411	38,844,598	39,434,797
1917.....	381,048	376,525	37,863,643	38,621,216
1918.....	283,592	348,877	38,422,175	39,054,644
1919.....	138,337	327,097	30,549,930	31,015,364
1920.....	302,567	323,396	36,300,024	36,925,987

PRODUCTION OF PIG IRON ACCORDING TO FUEL USED, 1916-1920.

Fuel used.	1916.	1917.	1918.	1919.	1920.
Coke*.....	38,844,598	37,863,643	38,422,175	30,549,930	36,300,024
Anthracite and coke†..	217,788	381,048	283,592	138,337	302,567
Charcoal.....	372,411	376,525	348,877	327,097	323,396
Total..Gross tons.	39,434,797	38,621,216	39,054,644	31,015,364	36,925,987

* Includes ferro-alloys made with electricity, electricity and coke, etc.

† Includes mixed anthracite and coke pig iron.

PRODUCTION OF COKE PIG IRON BY STATES, 1916-1920.*

States.	1916.	1917.	1918.	1919.	1920.
Maine, N. Y., N. J.	2,352,535	2,412,155	2,862,330	2,077,288	2,605,134
Pennsylvania . . .	16,285,928	15,161,616	14,922,380	12,137,105	13,680,003
Maryland	501,452	422,112	373,472	243,309	523,733
Va., Ga., Texas..	399,885	526,825	514,457	320,909	429,302
Alabama	2,723,683	2,913,841	2,561,293	2,110,578	2,367,122
West Va., Ky. . .	554,590	555,437	593,955	411,591	772,379
Tennessee	353,072	367,168	367,700	189,544	271,001
Ohio	8,602,228	8,518,603	8,764,132	7,102,627	8,533,470
Illinois	3,922,512	3,456,915	3,440,307	2,558,213	3,280,875
Ind., Mich., Wis.	2,353,188	2,738,406	3,151,811	2,758,521	3,060,691
Minn., Iowa, Mo., Col., Mont., Wash., Ore., Cal. }	795,525	790,565	870,338	640,245	776,314
Total.	38,844,598	37,863,643	38,422,175	30,549,930	36,300,024

* Includes ferro-alloys made with electricity, electricity and coke, etc.

Of the total bituminous output in 1920, 35,987,015 tons were made with coke alone and 153,916 tons with bituminous coal and coke mixed. In 1920 pig iron was made with bituminous coal and coke mixed in New York, Pennsylvania, Alabama, Ohio, and Illinois.

PRODUCTION OF CHARCOAL PIG IRON BY STATES, 1916-1920.

States.	1916.	1917.	1918.	1919.	1920.
Massachusetts, Connecticut....	5,719	10,527	11,485	6,678	6,281
Pennsylvania.....	2,568	2,436	2,087	1,143	564
Maryland		100	345	21,177	38,046
Alabama.....	39,202	39,864	26,559		
Tennessee, Ohio.....	2,969	2,783	2,122	226,873	205,523
Michigan.....	260,623	258,251	246,009		
Wisconsin, Missouri	61,330	62,564	60,270		
Total.....Gross tons.	372,411	*376,525	*348,877	327,097	323,396

* Includes small tonnage of charcoal and coke mixed pig iron in 1917 and 1918.

PRODUCTION OF COLD AND HOT AND WARM BLAST CHARCOAL PIG IRON, 1916-1920.

Kinds of iron.	1916.	1917.	1918.	1919.	1920.
Cold blast.....	5,323	5,219	4,209	2,113	1,734
Hot and warm blast	367,088	371,306	344,668	324,984	321,662
Total.....Gross tons.	372,411	*376,525	*348,877	327,097	323,396

* Includes small tonnage made with charcoal and coke mixed in 1917 and 1918.

METHODS BY WHICH ALL PIG IRON WAS CAST OR DELIVERED IN 1920, GROSS TONS.

States.	Molten condition.	Sand cast.	Machine cast.	Chill cast.	Direct castings.	Total. Gross tons.
Maine, Mass., Conn.		10,281				10,281
N. Y., N. J., Md....	1,637,717	574,229	877,730	34,748	443	3,124,867
Pennsylvania.....	9,518,321	1,033,543	3,050,774	370,242	10,254	13,983,134
Va., W. Va., Ala., Ky., Tenn.....	1,223,322	1,913,205	472,866	259,418	9,039	3,877,850
Ohio.....	4,826,080	622,475	2,973,245	102,126	9,544	8,533,470
Ind., Ill., Mich., Wis., Minn., Mo., Iowa, Montana, Col., Wash.....	5,087,970	458,713	1,828,559	17,946	3,197	7,396,385
Total.....	22,293,410	4,612,446	9,203,174	784,480	32,477	36,925,987

METHODS BY WHICH ALL PIG IRON WAS CAST OR DELIVERED.

Years.	Molten condition.	Sand cast.	Machine cast.	Chill cast.	Direct castings.	Total. Gross tons.
1912.	16,466,722	6,309,495	6,214,121	726,017	10,582	29,726,937
1913.	16,738,708	6,689,680	6,522,171	1,000,171	15,422	30,966,152
1914.	11,911,247	4,814,959	5,854,661	738,018	13,359	23,332,244
1915.	17,108,891	5,076,469	6,969,108	740,413	21,332	29,916,213
1916.	23,101,018	6,584,152	8,278,357	1,442,576	28,694	39,434,797
1917.	23,193,439	6,238,567	7,649,684	1,506,394	33,132	38,621,216
1918.	23,643,761	5,672,387	8,312,549	1,387,946	38,001	39,054,644
1919.	18,217,717	3,962,162	7,985,710	819,554	30,221	31,015,364
1920.	22,293,410	4,612,446	9,203,174	784,480	32,477	36,925,987

HOW FOUNDRY PIG IRON PRODUCED FOR SALE WAS CAST.

Years.	Molten condition.	Sand cast.	Machine cast.	Chill cast.	Direct castings.	Total. Gross tons.
1913. ....	.....	4,374,012	628,686	82,254	.....	5,084,952
1914. ....	.....	3,554,669	739,235	99,185	.....	4,393,089
1915. ....	.....	3,656,151	1,026,785	118,775	.....	4,801,711
1916. ....	.....	4,410,663	958,120	104,413	.....	5,473,196
1917. ....	.....	3,986,115	1,005,041	195,342	.....	5,186,498
1918. ....	.....	3,428,219	1,255,581	278,355	.....	4,962,155
1919.	10,888	2,846,268	1,671,392	288,686	.....	4,817,234
1920.	11,150	3,335,597	2,209,333	204,742	.....	5,760,822

HOW MALLEABLE PIG IRON PRODUCED FOR SALE WAS CAST.

Years.	Molten condition.	Sand cast.	Machine cast.	Chill cast.	Direct castings.	Total. Gross tons.
1913. ....	.....	501,568	450,616	37,057	.....	989,241
1914. ....	.....	299,588	338,605	33,578	.....	671,771
1915. ....	.....	232,732	554,600	42,589	.....	829,921
1916.	577	178,356	650,822	91,731	.....	921,486
1917. ....	.....	72,451	880,782	60,792	.....	1,014,025
1918. ....	.....	128,037	902,560	87,317	.....	1,117,914
1919.	2,792	169,433	756,359	70,644	.....	999,228
1920. ....	.....	245,715	1,014,381	24,395	.....	1,284,491

PIG IRON DELIVERED IN MOLTEN CONDITION BY GRADES.

Years.	Basic.	Bessemer.	All other.	Total. Gross tons.
1913.	8,915,179	7,823,317	212	16,738,708
1914.	6,436,043	5,465,565	9,639	11,911,247
1915.	9,648,769	7,458,822	1,300	17,108,891
1916.	13,248,510	9,833,863	18,645	23,101,018
1917.	13,696,600	9,486,950	9,889	23,193,439
1918.	14,453,688	9,189,817	256	23,643,761
1919.	10,921,986	7,271,321	24,410	18,217,717
1920.	13,150,553	9,111,449	31,408	22,293,410

MISCELLANEOUS PIG IRON STATISTICS.

PRODUCTION OF PIG IRON IN PENNSYLVANIA BY DISTRICTS.

Districts.	1916.	1917.	1918.	1919.	1920.
Lehigh Valley.....	1,337,187	1,377,584	1,383,159	990,356	1,070,798
Schuylkill and Eastern.	1,152,272	1,066,103	1,045,478	852,749	1,116,667
Lower Susquehanna....	790,016	873,137	829,107	434,448	635,213
Juniata Valley.....	161,291	180,260	145,572	143,713	150,344
Allegheny County.....	7,239,913	6,226,601	6,357,660	5,719,842	6,170,881
Shenango Valley.....	3,160,050	2,863,145	2,691,066	2,414,573	2,307,824
Other Western Penna..	2,665,555	2,952,898	2,746,229	1,720,904	2,531,407
Charcoal.....******
Total...Gross tons.	16,506,284	15,539,728	15,198,271	12,276,585	13,983,134

* Included with coke pig iron in above districts.

PRODUCTION OF PIG IRON IN OHIO BY DISTRICTS.

Districts.	1916.	1917.	1918.	1919.	1920.
Mahoning Valley.....	3,763,888	3,612,906	3,559,545	2,980,254	3,309,233
Lake Counties.....	2,612,233	2,496,391	2,602,917	2,244,324	2,855,934
Interior and Ohio River	1,669,657	1,758,545	1,832,847	1,187,293	1,599,634
Hanging Rock.....	557,117	650,761	768,823	690,756	768,669
Total...Gross tons.	8,602,895	8,518,603	8,764,132	7,102,627	8,533,470

PRODUCTION OF BASIC PIG IRON IN PENNSYLVANIA AND OHIO BY DISTRICTS, GROSS TONS.

Districts.	1916.	1917.	1918.	1919.	1920.
Lehigh Valley.....	706,405	817,267	1,027,861	531,105	642,575
Schuylkill and Eastern.	721,672	715,572	667,350	545,568	643,101
L. Susq. and Juniata..	511,086	566,637	581,613	237,945	392,990
Allegheny County.....	4,477,075	3,698,537	3,515,749	3,279,714	3,145,478
Shenango Valley.....	1,547,531	948,327	1,028,064	1,184,874	1,090,499
Other Western Penna.	1,420,501	1,603,055	1,504,343	848,006	1,381,612
Total for Penna....	9,384,270	8,349,395	8,324,980	6,627,212	7,296,255
Mahoning Valley.....	1,083,565	1,376,912	1,482,313	1,140,091	1,300,389
Lake Counties.....	743,549	777,228	857,189	718,701	820,193
Interior and Ohio River	459,661	635,188	688,785	456,872	650,747
Hanging Rock.....	170,101	198,052	332,394	226,305	176,982
Total for Ohio.....	2,456,876	2,987,380	3,360,681	2,541,969	2,948,311

PRODUCTION OF BESSEMER PIG IRON IN PENNSYLVANIA AND
OHIO BY DISTRICTS, GROSS TONS.

Districts.	1916.	1917.	1918.	1919.	1920.
Lehigh Valley	249,394	196,517	2,880	78,878	85,476
Schuylkill and Eastern.	228,246	170,675	183,419	114,046	122,772
L. Susq. and Juniata ..	131,527	178,861	143,936	155,367	107,861
Allegheny County.....	2,546,374	2,316,225	2,552,631	2,298,097	2,793,079
Shenango Valley.....	1,591,109	1,906,952	1,636,115	1,170,653	1,160,951
Other Western Penna..	786,357	915,787	791,043	485,130	685,627
Total for Penna...	5,533,007	5,685,017	5,310,024	4,302,171	4,955,766
Mahoning Valley.....	2,232,616	1,917,545	1,835,855	1,579,452	1,687,482
Lake Counties.....	1,449,894	1,203,431	1,192,108	1,098,402	1,331,685
Interior and Ohio River	1,118,908	1,025,075	1,081,499	629,506	891,085
Hanging Rock.....	131,813	164,723	135,539	59,976	68,535
Total for Ohio...	4,933,231	4,310,774	4,245,001	3,367,336	3,978,787

APPROXIMATE CONSUMPTION OF PIG IRON, GROSS TONS,
1895-1920.

Years.	Pro- duction.	Add stocks unsold on Jan. 1.	Add imports.	Deduct stocks Dec. 31.	Deduct exports.	Approximate consumption.
1895	9,446,308	661,328	53,232	506,132	26,164	9,628,572
1896	8,623,127	506,132	56,272	847,686	62,071	8,275,774
1897	9,652,680	847,686	19,212	874,978	262,686	9,381,914
1898	11,773,934	874,978	25,152	415,333	253,057	12,005,674
1899	13,620,703	415,333	40,393	68,309	228,678	13,779,442
1900	13,789,242	68,309	52,565	446,020	286,687	13,177,409
1901	15,878,354	446,020	62,930	73,647	81,211	16,232,446
1902	17,821,307	73,647	619,354	49,951	27,487	18,436,870
1903	18,009,252	49,951	599,574	598,489	20,379	18,039,909
1904	16,497,033	598,489	79,500	446,442	49,025	16,679,555
1905	22,992,380	*	212,466	*	49,221	23,155,625
1906	25,307,191	.....	379,828	.....	83,317	25,603,702
1907	25,781,361	.....	489,475	.....	73,703	26,197,133
1908	15,936,018	.....	92,202	.....	46,696	15,981,524
1909	25,795,471	.....	176,442	.....	61,989	25,909,924
1910	27,303,567	.....	237,233	.....	127,385	27,413,415
1911	23,649,547	.....	148,459	.....	120,799	23,677,207
1912	29,726,937	.....	129,325	.....	272,676	29,583,586
1913	30,966,152	.....	156,450	.....	277,648	30,844,954
1914	23,332,244	.....	139,683	.....	114,423	23,357,504
1915	29,916,213	.....	89,836	.....	224,509	29,781,540
1916	39,434,797	.....	135,349	.....	607,236	38,962,910
1917	38,621,216	.....	76,786	.....	656,220	38,041,782
1918	39,054,644	.....	34,711	.....	269,575	38,819,780
1919	31,015,364	.....	101,665	.....	321,261	30,795,768
1920	36,925,987	.....	185,944	.....	216,828	36,895,103

* Collection of statistics of unsold stocks discontinued in 1905.

MATERIALS CONSUMED BY BLAST FURNACES.

CONSUMPTION OF IRON ORE, MILL CINDER, SCALE, ETC., BY STATES, 1919-1920.

States.	1919—Gross tons.			1920—Gross tons.		
	Iron ore.	Mill cinder, scale, etc.	Total.	Iron ore.	Mill cinder, scale, etc.	Total.
Mass., Conn.	14,070	.....	14,070	13,688	45	13,733
N. Y., N. J. . .	3,930,224	66,244	3,996,468	4,870,609	139,081	5,009,690
Pennsylvania	21,037,137	1,949,631	22,986,768	23,857,571	2,283,522	26,141,093
Md., Virginia	871,052	183,758	1,054,810	1,340,152	344,268	1,684,420
W. Va., Ky. . .	711,482	56,253	767,735	1,354,015	81,217	1,435,232
Alabama	4,988,595	367,741	5,356,336	5,774,863	364,894	6,139,757
Tenn., Tex. . .	369,314	65,893	435,207	559,414	80,752	640,166
Ohio	12,541,561	747,034	13,288,595	15,077,923	868,950	15,946,873
Illinois	4,765,421	214,561	4,979,982	6,009,540	270,264	6,279,804
Ind., Mich. . .	4,951,748	317,569	5,269,317	5,435,160	357,892	5,793,052
Wis., Minn. . .	1,126,123	63,826	1,189,949	1,307,448	75,370	1,382,818
Mo., Col., } Wash. . . . }	709,065	91,381	800,446	849,201	120,180	969,381
Total	56,015,792	4,123,891	60,139,683	66,449,584	4,986,435	71,436,019

CONSUMPTION OF IRON ORE, MILL CINDER, SCALE, ETC., BY STATES, GROSS TONS, 1916-1920.

States.	1916.	1917.	1918.	1919.	1920.
Mass., Connecticut . . .	12,927	23,658	25,707	14,070	13,733
New York, New Jersey	4,524,232	4,641,752	5,536,583	3,996,468	5,009,690
Pennsylvania	31,451,242	29,389,799	29,169,806	22,986,768	26,141,093
Maryland, Virginia . . .	1,771,894	1,826,788	1,843,302	1,054,810	1,684,420
W. Virginia, Kentucky.	1,039,714	1,037,263	1,064,506	767,735	1,435,232
Alabama	7,092,186	7,487,284	6,546,606	5,356,336	6,139,757
Tenn., Georgia, Texas.	845,729	866,365	842,743	435,207	640,166
Ohio	16,195,138	16,284,471	16,693,965	13,288,595	15,946,873
Illinois	7,647,763	6,718,430	6,710,691	4,979,982	6,279,804
Indiana, Michigan . . .	4,344,628	5,238,806	6,105,408	5,269,317	5,793,052
Wisconsin, Minnesota . .	1,592,630	1,465,324	1,445,247	1,189,949	1,382,818
Missouri, Col., Wash. . .	974,275	1,002,020	1,045,419	800,446	969,381
Total	77,492,358	75,981,960	77,029,983	60,139,683	71,436,019

**CONSUMPTION OF ORE, CINDER, ETC., PER TON OF PIG IRON
MADE, GROSS TONS, 1909-1920.**

Years.	Ore, briquettes, etc.	Per ton iron made.	Cinder, scale, etc.	Per ton iron made.	Total ore, cinder, etc.	Per ton iron made.	Per cent. ore, etc.	Per cent. cinder, etc.
1909....	48,660,000	1.886	2,535,000	0.098	51,195,000	1.984	95.0	5.0
1910....	51,739,000	1.895	2,800,000	0.102	54,539,000	1.997	94.9	5.1
1911....	43,980,000	1.859	3,761,000	0.159	47,741,000	2.018	92.1	7.9
1912....	55,656,000	1.872	4,319,000	0.145	59,975,000	2.017	92.8	7.2
1913....	58,291,000	1.882	3,051,000	0.099	61,342,000	1.981	95.0	5.0
1914....	42,988,000	1.842	3,378,000	0.145	46,366,000	1.987	92.7	7.3
1915....	55,137,000	1.843	4,483,000	0.149	59,620,000	1.992	92.5	7.5
1916....	73,102,982	1.856	4,389,376	0.112	77,492,358	1.968	94.3	5.7
1917....	71,121,116	1.847	4,860,844	0.126	75,981,960	1.973	93.6	6.4
1918....	71,983,356	1.853	5,046,627	0.130	77,029,983	1.983	93.4	6.6
1919....	56,015,792	1.813	4,123,891	0.133	60,139,683	1.946	93.1	6.9
1920....	66,449,584	1.807	4,986,435	0.136	71,436,019	1.943	93.0	7.0

**CONSUMPTION OF FUEL PER GROSS TON PIG IRON MADE, IN
POUNDS AND BUSHELS, 1912-1920.**

Years.	Coke and bit. coal. Pounds.	Anth. coal and coke mixed.		Anth. coal alone. Pounds.	Charcoal. Bushels.
		Anth. coal. Pounds.	Coke. Pounds.		
1912.....	2,436.5	565.2	2,341.6	2,954.7	102.1
1913.....	2,433.3	625.2	2,415.6	2,978.1	103.7
1914.....	2,354.4	742.2	1,935.4	3,132.4	107.1
1915.....	2,252.0	957.1	1,686.9	.....	98.3
1916.....	2,285.3	665.1	2,001.0	.....	99.0
1917.....	2,339.7	632.5	2,228.8	.....	97.9
1918.....	2,375.2	496.1	2,921.8	.....	98.8
1919.....	2,310.2	414.6	2,307.2	.....	99.2
1920.....	2,305.7	424.7	2,515.8	.....	98.3

**CONSUMPTION OF COKE, COAL, AND CHARCOAL IN THE
MANUFACTURE OF PIG IRON, 1912-1920.**

Years.	Coke consumed. Net tons.	Bit. coal consumed. Net tons.	Anth. coal consumed. Gross tons.	Charcoal consumed. Bushels.
1912.....	35,721,127	47,022	73,794	35,436,017
1913.....	37,192,287	39,008	107,318	35,242,059
1914.....	27,070,856	61,815	31,421	28,272,567
1915.....	33,224,328	104,614	36,216	29,133,240
1916.....	44,431,905	112,255	64,664	36,865,920
1917.....	44,493,316	105,253	107,603	36,873,542
1918.....	45,703,594	105,017	62,803	34,462,881
1919.....	35,250,943	63,873	26,100	32,446,350
1920.....	41,976,171	70,214	57,369	31,798,814

LIMESTONE CONSUMED IN MAKING PIG IRON, BY STATES,
GROSS TONS, 1916-1920.

States.	1916.	1917.	1918.	1919.	1920.
Massachusetts, Conn..	1,365	7,303	4,980	2,498	2,438
New York, New Jersey.	1,160,804	1,193,983	1,541,602	1,068,005	1,316,762
Pennsylvania.....	8,130,711	7,840,163	8,014,922	6,454,205	7,396,869
Maryland, Virginia....	648,297	654,543	667,043	406,761	705,116
Alabama.....	714,608	1,045,635	981,598	711,494	841,584
W. Va., Ky., Ga., Tex.	276,971	293,375	302,192	212,396	430,180
Tennessee.....	192,007	218,996	261,363	128,150	200,771
Ohio.....	4,202,533	4,153,384	4,275,803	3,659,502	4,053,451
Illinois.....	1,470,466	1,417,208	1,410,386	958,397	1,265,200
Indiana, Michigan....	792,158	903,079	1,015,830	959,039	1,054,599
Wisconsin, Minnesota.	302,232	336,484	321,969	233,984	249,152
Missouri, Col., Wash...	415,967	482,097	410,715	251,073	308,973
Total.....	18,308,119	18,546,250	19,208,403	15,045,504	17,825,095

The average consumption of limestone per ton of pig iron made was 1,086.0 pounds in 1920, as compared with 1,090.6 pounds in 1919. By anthracite and bituminous furnaces the consumption in 1920 was 1,092.6 pounds, against 1,099.6 pounds in 1919, and by charcoal furnaces it was 342.3 against 252.7 pounds in 1919.

BLAST FURNACE STATISTICS.

ANNUAL CAPACITY OF COMPLETED BLAST FURNACES,
DECEMBER 31, 1920.

States.	Number.			Annual capacity—Gross tons.		
	Coke.*	Char.	Total.	Coke.*	Char.	Total.
Massachusetts.....	0	1	1	0	5,000	5,000
Connecticut.....	0	2	2	0	12,000	12,000
New York.....	26	1	27	3,383,000	5,000	3,388,000
New Jersey.....	4	0	4	455,000	0	455,000
Pennsylvania.....	158	5	163	20,062,375	12,500	20,074,875
Maryland.....	6	1	7	780,000	6,000	786,000
Virginia.....	17	0	17	885,000	0	885,000
West Virginia.....	5	0	5	607,050	0	607,050
Kentucky.....	7	0	7	415,000	0	415,000
Tennessee.....	14	3	17	604,200	66,300	670,500
Georgia.....	2	2	4	102,000	32,000	134,000
Alabama.....	40	3	43	3,714,175	70,750	3,784,925
Mississippi.....	0	1	1	0	3,500	3,500
Texas.....	1	0	1	36,000	0	36,000
Ohio.....	79	0	79	10,781,800	0	10,781,800
Indiana.....	16	0	16	2,894,950	0	2,894,950
Illinois.....	25	0	25	4,145,250	0	4,145,250
Michigan.....	4	9	13	586,250	290,300	876,550
Wisconsin.....	6	2	8	476,050	57,000	533,050
Minnesota.....	3	0	3	412,700	0	412,700
Missouri.....	1	2	3	144,000	56,000	200,000
Colorado.....	5	0	5	625,000	0	625,000
Oregon.....	1	0	1	15,000	0	15,000
Total completed.....	420	32	452	51,124,800	616,350	51,741,150
Total building.....	6	1	†7	784,000	15,000	799,000
Grand total.....	426	33	459	51,908,800	631,350	52,540,150

* Includes furnaces which use anthracite coal and coke mixed or coke and bituminous coal.

† Includes 1 partly erected charcoal stack on which work has been suspended; also 1 coke stack, the construction of which has been virtually completed, but no machinery installed, and work on which has been suspended.

FURNACES ACTUALLY IN BLAST IN EACH HALF OF 1920,
BY STATES.

States.	Com- pleted June 30.	In blast.		Com- pleted Dec. 31.	In blast.	
		June 30 1920.	1st half 1920.		Dec. 31, 1920.	2d half 1920.
Massachusetts	1	1	1	1	1	1
Connecticut	2	1	1	2	0	1
New York	27	21	24	27	16	23
New Jersey	4	2	2	4	1	2
Pennsylvania	165	117	140	163	73	138
Maryland	6	4	5	7	2	6
Virginia	17	10	11	17	4	12
West Virginia	5	4	4	5	3	5
Kentucky	7	5	5	7	0	5
Tennessee	17	10	12	17	3	12
Georgia	4	0	0	4	0	0
Alabama	44	28	29	43	15	31
Mississippi	1	0	0	1	0	0
Texas	1	0	0	1	0	0
Ohio	79	65	74	79	49	74
Indiana	16	12	15	16	12	15
Illinois	25	19	22	25	16	21
Michigan	13	11	11	13	10	12
Wisconsin	8	4	4	8	3	4
Minnesota	3	2	3	3	2	3
Missouri	3	3	3	3	3	3
Colorado	5	3	4	5	3	4
Oregon	1	0	0	1	0	0
Total	454	322	370	452	216	372

BUILDING BLAST FURNACES, DECEMBER 31, 1920.

Name of company.	Location of furnace.	No. of stacks.	Fuel.	Annual capacity.
Claire Furnace Co.....	Sharpsville, Pa.....	1	Coke	150,000
Hamilton Furnace Co....	Hamilton, Ohio.....	1	Coke	175,000
Missouri Iron & Steel Corp.	Haigart, Mo.....	1	Coke	54,000
Noble Electric Steel Co...	Heroult, Cal.....	(a) 1	Coke	5,000
St. Louis Coke & Chem. Co.	Granite City, Ill.....	1	Coke	200,000
Salisbury Iron Corp.....	East Canaan, Conn..	(b) 1	Char.	15,000
Trumbull-Cliffs Fur. Co...	Warren, Ohio.....	1	Coke	200,000
Total building furnaces		7	.....	799,000

(a) Stack virtually completed; no machinery installed; work suspended.

(b) Partly built; work suspended.

BLAST FURNACES COMPLETED IN 1920.

Name of company.	Location of furnace.	No. of stacks.	Fuel.	Annual cap.	Blown in.
Bethlehem Steel Co. . . .	Sparrows Point, Md.	2	Coke	300,000	Fur "E," Mar. 10, '20 Fur "F," July 7, '20
Bon Air Coal & Iron Corp	Wrigley, Tenn.	1	Char.	25,000	April 17, 1920
Ford Motor Co.	River Rouge, Mich.	2	Coke	328,500	No. 1, May 17, 1920
Pittsb'gh Cruc. Steel Co.	Midland, Pa.	1	Coke	200,000	No. 2, not blown in in 1920
					No. 3, Oct. 9, 1920
Total.		6	.....	853,500	.....

BLAST FURNACES ABANDONED OR DISMANTLED.

Name of company.	Location of furnace.	No. of stacks.	Fuel.	Annual cap.	When built.
Bethlehem Steel Co.	Cornwall, Pa.	2 (a)	A. & C.	50,000	Fur. "E," 1872-73 Fur. "F," 1879
Colorado Fuel & Iron Co.	Pueblo, Colorado . .	1	Coke	65,000	Fur. "C," 1880-81
Detroit Furnace Co.	Detroit, Mich.	1	Coke	30,000	1870
Eagle Furnace Co.	Attalla, Ala.	1	Char	12,000	1888-89
Eastern Steel Co.	Pottstown, Pa.	1	Coke	alt. st'k	No. 1, 1875
Jackson, J. T.	Liberty Furnace Va.	1	Char	25,000	1890-91
Total.		7	....	182,000	.....

(a) Bird Coleman Furnaces.

COMPLETED AND REBUILDING BLAST FURNACES, DECEMBER 31, OF EACH YEAR.

Fuel used.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
Bituminous.	394	389	390	388	400	407	408	409
Anthracite.	23	20	15	20	20	15	13	11
Charcoal	45	42	40	40	35	37	32	32
Total.	462	451	445	448	455	459	453	452

FURNACES IN BLAST ON DECEMBER 31 OF EACH YEAR.

Fuel used.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
Bituminous.	183	144	289	303	306	332	260	201
Anthracite.	5	3	4	12	15	9	5	2
Charcoal	17	17	17	18	18	19	15	13
Total.	205	164	310	333	339	360	280	216

IDLE FURNACES ON DECEMBER 31 OF EACH YEAR.

Fuel used.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
Bituminous.	211	245	101	85	94	75	148	208
Anthracite.	18	17	11	8	5	6	8	9
Charcoal	28	25	23	22	17	18	17	19
Total.	257	287	135	115	116	99	173	236

ACTIVE AND IDLE PENNSYLVANIA AND OHIO FURNACES.

Districts.	December 31, 1919.			December 31, 1920.		
	Active.	Idle.	Total.	Active.	Idle.	Total.
Lehigh Valley.....	13	9	22	6	16	22
Schuylkill Valley and Eastern...	11	9	20	6	13	19
Lower Susquehanna Valley.....	6	12	18	4	12	16
Juniata Valley.....	4	3	7	2	5	7
Allegheny County.....	41	7	48	35	13	48
Shenango Valley.....	20	5	25	10	16	26
Other Western Pennsylvania....	17	8	25	10	15	25
Total for Pennsylvania.....	112	53	165	73	90	163
Mahoning Valley.....	22	5	27	21	6	27
Lake Counties.....	14	5	19	15	4	19
Interior and Ohio River.....	8	10	18	10	8	18
Hanging Rock.....	10	5	15	3	12	15
Total for Ohio.....	54	25	79	49	30	79

FURNACES ACTIVE AND IDLE IN EACH HALF YEAR, 1919-1920.

Fuel used.	1919.						1920.					
	First half.			Second half.			First half.			Second half.		
	Active.	Idle.	Total.	Active.	Idle.	Total.	Active.	Idle.	Total.	Active.	Idle.	Total.
Coke.....	355	57	412	319	89	408	342	64	406	343	66	409
Anthracite and coke mixed...	7	4	11	6	7	13	10	5	15	9	2	11
Charcoal.....	20	13	33	19	13	32	18	15	33	20	12	32
Total.....	382	74	456	344	109	453	370	84	454	372	80	452

ELECTRIC AND SPECIAL FURNACES.

In 1920 there were 28 plants in the United States which manufactured pig iron, ferro-manganese, ferro-silicon, ferro-titanium, ferro-vanadium, ferro-tungsten, ferro-chrome, ferro-molybdenum, or other ferro-alloys with electricity, electricity and charcoal, electricity and coke, etc., or by some special process.

COMPLETED BLAST FURNACES ON DECEMBER 31, 1911-1920.

States.	Number of completed and rebuilding furnaces, Dec. 31.									
	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
Massachusetts	2	2	2	2	2	2	2	2	1	1
Connecticut	3	3	3	3	3	3	3	2	2	2
New York	29	29	28	27	27	27	25	27	27	27
New Jersey	8	7	7	6	5	5	5	5	4	4
Pennsylvania	164	163	161	159	156	157	163	165	165	163
Maryland	5	5	5	5	5	5	5	5	5	7
Virginia	25	25	24	22	22	22	19	19	18	17
West Virginia	4	4	4	4	4	4	4	4	5	5
Kentucky	8	8	8	6	6	6	7	7	7	7
Tennessee	19	19	18	18	18	18	16	16	16	17
Georgia	4	3	4	4	4	4	4	4	4	4
Alabama	49	49	49	48	47	47	47	44	44	43
Mississippi	0	0	1	1	1	1	1	1	1	1
Texas	4	4	4	3	2	2	2	2	1	1
Ohio	75	75	75	74	74	77	79	79	79	79
Indiana	9	10	10	10	10	10	14	16	16	16
Illinois	24	26	26	26	26	24	24	25	25	25
Michigan	15	16	15	14	14	14	14	14	12	13
Wisconsin	7	7	7	8	8	8	8	8	8	8
Minnesota	1	1	1	1	2	3	3	3	3	3
Missouri	2	2	2	2	2	2	2	3	3	3
Colorado	6	6	6	6	6	6	6	6	6	5
Oregon	1	1	1	1	1	1	1	1	1	1
Washington	1	1	1	1	0	0	1	1	0	0
Total	465	466	462	451	445	448	455	459	453	452

ACTIVE AND IDLE BLAST FURNACES ON DEC. 31, 1889-1920.

Years.	Active.	Idle.	Total.	Years.	Active.	Idle.	Total.
1889	344	226	570	1905	313	111	424
1890	311	251	562	1906	340	89	429
1891	313	256	569	1907	167	276	443
1892	253	311	564	1908	236	222	458
1893	137	381	518	1909	338	130	468
1894	185	326	511	1910	206	267	473
1895	242	226	468	1911	231	234	465
1896	159	311	470	1912	313	153	466
1897	191	232	423	1913	205	257	462
1898	202	212	414	1914	164	287	451
1899	289	125	414	1915	310	135	445
1900	232	174	406	1916	333	115	448
1901	266	140	406	1917	339	116	455
1902	307	105	412	1918	360	99	459
1903	182	243	425	1919	280	173	453
1904	261	168	429	1920	216	236	452

STEEL INGOTS AND CASTINGS.

PRODUCTION OF STEEL BY PROCESSES, GROSS TONS, 1878-1920.

Years.	Open-hearth.	Bessemer.	Crucible.	All other.	Total.
1878.....	32,255	653,773	38,309	7,640	731,977
1879.....	50,259	829,439	50,696	4,879	935,273
1880.....	100,851	1,074,262	64,664	7,558	1,247,335
1881.....	131,202	1,374,247	80,145	2,720	1,588,314
1882.....	143,341	1,514,687	75,973	2,691	1,736,692
1883.....	119,356	1,477,345	71,835	4,999	1,673,535
1884.....	117,515	1,375,531	53,270	4,563	1,550,879
1885.....	133,376	1,519,430	57,599	1,515	1,711,920
1886.....	218,973	2,269,190	71,973	2,367	2,562,503
1887.....	322,069	2,936,033	75,375	5,594	3,339,071
1888.....	314,318	2,511,161	70,279	3,682	2,899,440
1889.....	374,543	2,930,204	75,865	5,120	3,385,732
1890.....	513,232	3,688,871	71,175	3,793	4,277,071
1891.....	579,753	3,247,417	72,586	4,484	3,904,240
1892.....	669,889	4,168,435	84,709	4,548	4,927,581
1893.....	737,890	3,215,686	63,613	2,806	4,019,995
1894.....	784,936	3,571,313	51,702	4,081	4,412,032
1895.....	1,137,182	4,909,128	67,666	858	6,114,834
1896.....	1,298,700	3,919,906	60,689	2,394	5,281,689
1897.....	1,608,671	5,475,315	69,959	3,012	7,156,957
1898.....	2,230,292	6,609,017	89,747	3,801	8,932,857
1899.....	2,947,316	7,586,354	101,213	4,974	10,639,857
1900.....	3,398,135	6,684,770	100,562	4,862	10,188,329
1901.....	4,656,309	8,713,302	98,513	5,471	13,473,595
1902.....	5,687,729	9,138,363	112,772	8,386	14,947,250
1903.....	5,829,911	8,592,829	102,434	9,804	14,534,978
1904.....	5,908,166	7,859,140	83,391	9,190	13,859,887
1905.....	8,971,376	10,941,375	102,233	8,963	20,023,947
1906.....	10,980,413	12,275,830	127,513	14,380	23,398,136
1907.....	11,549,736	11,667,549	131,234	14,075	23,362,594
1908.....	7,836,729	6,116,755	63,631	6,132	14,023,247
1909.....	14,493,936	9,330,783	107,355	22,947	23,955,021
1910.....	16,504,509	9,412,772	122,303	55,335	26,094,919
1911.....	15,598,650	7,947,854	97,653	31,949	23,676,106
1912.....	20,780,723	10,327,901	121,517	21,162	31,251,303
1913.....	21,599,931	9,545,706	121,226	34,011	31,300,874
1914.....	17,174,684	6,220,846	89,869	27,631	23,513,030
1915.....	23,679,102	8,287,213	113,782	70,939	32,151,036
1916.....	31,415,427	11,059,039	129,692	169,522	42,773,680
1917.....	34,148,893	10,479,960	126,716	305,038	45,060,607
1918.....	34,459,391	9,376,236	115,112	511,693	44,462,432
1919.....	26,948,694	7,271,562	63,572	387,404	34,671,232
1920.....	32,671,895	8,883,087	72,265	505,687	42,132,934

PRODUCTION OF STEEL INGOTS AND CASTINGS BY PROCESSES.

Years	Open-hearth.			Bessemer.	Cru- cible.	Elec- tric.	Mis- cella- neous.	Total. Gross tons.
	Basic.	Acid.	Total.					
1906.	9,658,760	1,321,653	10,980,413	12,275,830	127,513	.....	14,380	23,398,136
1907.	10,279,315	1,270,421	11,549,736	11,667,549	131,234	.....	14,075	23,362,594
1908.	7,140,425	696,304	7,836,729	6,116,755	63,631	.....	6,132	14,023,247
1909.	13,417,472	1,076,464	14,493,936	9,330,783	107,355	13,762	9,185	23,955,021
1910.	15,292,329	1,212,180	16,504,509	9,412,772	122,303	52,141	3,194	26,094,919
1911.	14,685,932	912,718	15,598,650	7,947,854	97,653	29,105	2,844	23,676,106
1912.	19,641,502	1,139,221	20,780,723	10,327,901	121,517	18,309	2,853	31,251,303
1913.	20,344,626	1,255,305	21,599,931	9,545,706	121,226	30,180	3,831	31,300,874
1914.	16,271,129	903,555	17,174,684	6,220,846	89,869	24,009	3,622	23,513,030
1915.	22,308,725	1,370,377	23,679,102	8,287,213	113,782	69,412	1,527	32,151,036
1916.	29,616,658	1,798,769	31,415,427	11,059,039	129,692	168,918	604	42,773,680
1917.	32,087,507	2,061,386	34,148,893	10,479,960	126,716	304,543	495	45,060,607
1918.	32,476,571	1,982,820	34,459,391	9,376,236	115,112	511,364	329	44,462,432
1919.	25,719,312	1,229,382	26,948,694	7,271,562	63,572	384,452	2,952	34,671,232
1920.	31,375,723	1,296,172	32,671,895	8,883,087	72,265	502,152	3,535	42,132,934

PRODUCTION OF STEEL INGOTS.

1906.	9,345,212	915,310	10,260,522	12,243,229	117,170	.....	3,510	22,624,431
1907.	9,912,839	890,372	10,803,211	11,634,276	121,001	.....	989	22,559,477
1908.	6,985,420	539,532	7,524,952	6,096,196	55,360	.....	519	13,677,027
1909.	13,111,467	781,429	13,892,896	9,296,969	94,672	13,456	786	23,298,779
1910.	14,858,353	782,805	15,641,158	9,354,437	107,671	50,821	.....	25,154,087
1911.	14,419,306	608,153	15,027,459	7,890,753	83,623	27,227	417	23,029,479
1912.	19,197,504	712,371	19,909,875	10,259,151	100,967	14,147	547	30,284,682
1913.	19,884,465	805,250	20,689,715	9,465,200	103,655	20,973	582	30,280,130
1914.	15,936,985	633,382	16,570,367	6,154,964	78,683	15,458	312	22,819,784
1915.	21,975,622	968,148	22,943,770	8,194,737	99,026	46,348	331	31,284,212
1916.	29,011,146	1,227,832	30,238,978	10,916,248	120,341	126,048	302	41,401,917
1917.	31,528,939	1,406,798	32,935,737	10,320,688	122,882	239,632	261	43,619,200
1918.	31,970,691	1,347,870	33,318,561	9,215,392	113,782	403,068	219	43,051,022
1919.	25,405,347	780,827	26,186,174	7,172,743	62,563	272,942	373	33,694,795
1920.	30,926,393	759,102	31,685,495	8,778,107	70,536	346,956	298	40,881,392

PRODUCTION OF STEEL CASTINGS.

1906.	313,548	406,343	719,891	32,601	10,343	.....	10,870	773,705
1907.	366,476	380,049	746,525	33,273	10,233	.....	13,086	803,117
1908.	155,005	156,772	311,777	20,559	8,271	.....	5,613	346,220
1909.	306,005	295,035	601,040	33,814	12,683	306	8,399	656,242
1910.	433,976	429,375	863,351	58,335	14,632	1,320	3,194	940,832
1911.	266,626	304,565	571,191	57,101	14,030	1,878	2,427	646,627
1912.	443,998	426,850	870,848	68,750	20,550	4,162	2,311	966,621
1913.	460,161	450,055	910,216	80,506	17,571	9,207	3,244	1,020,744
1914.	334,144	270,173	604,317	65,882	11,186	8,551	3,310	693,246
1915.	333,103	402,229	735,332	92,476	14,756	23,064	1,196	866,824
1916.	605,512	570,937	1,176,449	142,791	9,351	42,870	302	1,371,763
1917.	558,568	654,588	1,213,156	159,272	3,834	64,911	234	1,441,407
1918.	505,880	634,950	1,140,830	160,844	1,330	108,296	110	1,411,410
1919.	313,965	448,555	762,520	98,819	1,009	111,510	2,579	976,437
1920.	449,330	537,070	986,400	104,980	1,729	155,196	3,237	1,251,542

PERCENTAGE OF PRODUCTION OF STEEL BY PROCESSES.

Processes.	1919—Per cent.			1920—Per cent.		
	Ingots.	Castings.	Total.	Ingots.	Castings.	Total.
Open-hearth.....	77.7	78.1	77.7	77.5	78.8	77.5
Bessemer.....	21.3	10.1	21.0	21.5	8.4	21.1
Crucible and all other..	1.0	11.8	1.3	1.0	12.8	1.4
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Basic open-hearth.....	75.4	32.2	74.2	75.6	35.9	74.4
Acid open-hearth.....	2.3	45.9	3.5	1.9	42.9	3.1

In 1920, 205 works in 24 States and the District of Columbia made steel ingots, against 198 works in 26 States and the District of Columbia in 1919.

In 1920, 326 works in 33 States, the District of Columbia, Alaska, and the Canal Zone, Panama, made steel castings, against 310 works in 32 States, the District of Columbia, and the Canal Zone, Panama, in 1919.

PRODUCTION OF ALL KINDS OF STEEL INGOTS AND CASTINGS
BY STATES, 1916-1920.

States.	1916.	1917.	1918.	1919.	1920.
New England.....	285,135	340,376	341,293	297,733	302,835
New York.....	1,832,477	2,045,210	2,204,971	1,241,103	1,954,562
New Jersey.....	214,071	247,183	237,152	219,153	239,720
Pennsylvania.....	19,597,181	19,998,154	19,067,369	15,676,950	17,633,349
Delaware, Maryland..	556,897	598,876	506,642	411,913	714,031
Dist. of Col., Virginia..	12,181	19,336	20,916	16,133	16,058
West Virginia.....	558,160	552,249	476,607	328,664	512,174
Kentucky, Tennessee..	312,392	376,151	428,191	278,679	479,745
Ga., Ala., N. Car., S. Car.	1,186,099	1,292,247	1,151,821	1,106,525	1,226,753
Louisiana, Texas.....	2,600	2,104	2,783	4,010	3,701
Ohio.....	9,784,409	10,373,407	10,718,471	8,255,657	10,081,750
Indiana.....	3,245,599	3,725,522	3,915,399	3,129,884	3,791,901
Illinois.....	3,827,098	3,792,135	3,654,794	2,628,085	3,648,244
Michigan.....	39,621	57,900	61,251	37,772	32,381
Wisconsin.....	62,490	67,530	89,108	53,692	63,365
Minnesota.....	364,937	575,889	591,527	305,154	452,772
Missouri.....	80,578	93,771	123,616	25,761	50,968
Iowa, Ark., Nebraska..	65,448	59,631	34,319	37,793	33,946
Okla., Col., Wash.....	631,979	663,987	615,527	428,184	623,298
Utah, Oregon.....	3,484	7,277	20,084	17,797	28,865
California, Canal Zone (Panama, Alaska...)	110,844	171,672	200,591	170,590	242,516
Total..Gross tons.	42,773,680	45,060,607	44,462,432	34,671,232	42,132,934

The output of a few plants has been estimated.

**PRODUCTION OF OPEN-HEARTH STEEL INGOTS AND CASTINGS BY
STATES, 1916-1920.**

States.	1916.	1917.	1918.	1919.	1920.
New England.....	278,768	332,597	329,630	286,826	290,967
New York, New Jersey.	1,872,258	2,110,846	2,245,239	1,296,005	2,010,895
Pennsylvania	16,030,251	16,284,102	15,574,101	12,692,112	14,184,477
Delaware, Maryland, District of Columbia.	481,574	514,457	327,834	401,494	712,535
West Va., Kentucky, Georgia, Ala., Tenn..	1,429,867	1,616,952	1,548,253	1,426,771	1,728,017
Ohio.....	5,057,751	6,074,857	6,729,955	5,112,616	6,341,016
Indiana.....	3,243,961	3,722,931	3,910,899	3,122,486	3,785,056
Illinois.....	1,812,169	1,966,296	2,283,991	1,664,993	2,302,776
Michigan, Wisconsin...	61,140	67,211	67,051	41,067	42,259
Other States.....	1,147,688	1,458,644	1,442,438	904,324	1,273,897
Total..Gross tons.	31,415,427	34,148,893	34,459,391	26,948,694	32,671,895

PRODUCTION OF BESSEMER STEEL BY STATES, 1916-1920.

States.	1916.	1917.	1918.	1919.	1920.
Ohio.....	4,711,784	4,256,337	3,920,442	3,073,941	3,662,718
Pennsylvania	3,444,163	3,537,094	3,281,941	2,851,402	3,279,023
Illinois.....	1,958,259	1,763,052	1,229,568	906,324	1,243,837
Other States.....	944,833	923,477	944,285	439,895	697,509
Total..Gross tons.	11,059,039	10,479,960	9,376,236	7,271,562	8,883,087

**PRODUCTION OF BESSEMER STEEL BY STANDARD AND OTHER
CONVERTERS, 1903-1920.**

Years.	Standard Bes- semer process.	Tropenas and all other modi- fied processes.	Total. Gross tons.
1903.....	8,578,712	14,117	8,592,829
1904.....	7,849,773	9,367	7,859,140
1905.....	10,920,591	20,784	10,941,375
1906.....	12,244,309	31,521	12,275,830
1907.....	11,635,092	32,457	11,667,549
1908.....	6,096,478	20,277	6,116,755
1909.....	9,297,781	33,002	9,330,783
1910.....	9,355,350	57,422	9,412,772
1911.....	7,893,961	53,893	7,947,854
1912.....	10,260,913	66,988	10,327,901
1913.....	9,465,882	79,824	9,545,706
1914.....	6,155,203	65,643	6,220,846
1915.....	8,195,077	92,136	8,287,213
1916.....	10,917,113	141,926	11,059,039
1917.....	10,320,392	159,568	10,479,960
1918.....	9,216,416	159,820	9,376,236
1919.....	7,173,714	97,848	7,271,562
1920.....	8,779,805	103,282	8,883,087

DUPLEX STEEL INGOTS AND CASTINGS.

Included in the 31,375,723 tons of basic open-hearth steel ingots and castings produced in 1920 are 3,279,119 tons of duplex steel ingots and castings which were made from metal partly purified in Bessemer converters and finally purified in basic open-hearth steel furnaces, against 2,819,785 tons in 1919, an increase of 459,334 tons, or 16.29 per cent.

PRODUCTION OF DUPLEX STEEL INGOTS AND CASTINGS, GROSS TONS, 1912-1920.

Years.	Gross tons.	Years.	Gross tons.	Years.	Gross tons.
1912.....	1,438,654	1915....	1,781,491	1918....	3,870,017
1913.....	2,210,718	1916....	3,436,457	1919....	2,819,785
1914.....	835,690	1917....	3,791,830	1920....	3,279,119

Similar statistics are not available prior to 1912.

In 1920 duplex steel was produced by 9 works in 6 States, against 9 works in 6 States in 1919.

ALLOY STEEL INGOTS AND CASTINGS.

PRODUCTION OF ALLOY STEEL INGOTS AND CASTINGS.

Years.	Ingots.	Castings.	Total.	Years.	Ingots.	Castings.	Total.
1909.....	158,978	23,002	181,980	1915....	923,251	97,896	1,021,147
1910.....	538,462	29,357	567,819	1916....	1,306,157	56,458	1,362,615
1911.....	425,169	56,290	481,459	1917....	1,576,806	67,529	1,644,335
1912.....	689,392	103,109	792,501	1918....	1,721,367	66,485	1,787,852
1913.....	625,430	88,927	714,357	1919....	1,435,816	45,372	1,481,188
1914.....	577,107	69,846	646,953	1920....	1,591,939	68,353	1,660,292

PRODUCTION OF ALLOY STEEL INGOTS AND CASTINGS, BY PROCESSES, GROSS TONS, 1920.

Processes.	Ingots.	Castings.	Total.
Open-hearth steel—basic.....	1,116,923	2,326	1,119,249
Open-hearth steel—acid.....	129,832	34,565	164,397
Bessemer steel.....	81,809	19,745	101,554
Crucible steel.....	29,513	7	29,520
Electric and miscellaneous steel.....	233,862	11,710	245,572
Total.....	1,591,939	68,353	1,660,292

In 1920 there were 152 works in 25 States and the District of Columbia which made alloy steel ingots or castings.

ACTIVE AND IDLE STEEL WORKS BY STATES, 1920.

States.	Open-hearth steel plants.			Bessemer steel plants.			Crucible, electric and misc. steel plants.		
	Act.	Idle.	Total.	Act.	Idle.	Total.	Act.	Idle.	Total.
Maine, New Hamp.	0	1	1	0	0	0	1	0	1
Massachusetts	7	0	7	2	1	3	9	3	12
Rhode Island	1	0	1	0	0	0	1	0	1
Connecticut	2	2	4	2	0	2	5	0	5
New York	8	2	10	4	1	5	26	2	28
New Jersey	7	1	8	2	0	2	6	2	8
Pennsylvania	89	5	94	22	2	24	54	8	62
Delaware	3	1	4	2	1	3	0	1	1
Maryland	2	1	3	1	0	1	2	0	2
District of Columbia	2	0	2	0	1	1	1	1	2
Virginia	0	0	0	1	1	2	4	0	4
West Virginia	4	1	5	2	0	2	1	1	2
Kentucky	2	0	2	1	0	1	0	0	0
Tennessee	1	0	1	1	0	1	0	0	0
South Carolina	0	0	0	0	0	0	1	0	1
Georgia	2	0	2	0	0	0	1	0	1
Alabama	4	0	4	1	0	1	1	0	1
Louisiana	0	0	0	2	0	2	1	0	1
Texas	0	0	0	1	0	1	2	0	2
Ohio	33	1	34	21	1	22	23	2	25
Indiana	9	0	9	3	0	3	5	3	8
Illinois	12	0	12	10	1	11	13	1	14
Michigan	3	1	4	4	0	4	8	3	11
Wisconsin	5	0	5	7	0	7	11	1	12
Minnesota	3	0	3	2	0	2	3	0	3
Missouri	3	1	4	1	0	1	2	0	2
Iowa	2	1	3	1	0	1	3	0	3
Arkansas	0	0	0	0	0	0	1	0	1
Oklahoma	0	0	0	0	0	0	1	0	1
Nebraska	0	0	0	0	0	0	1	0	1
Colorado	1	0	1	1	1	2	3	0	3
Utah	1	0	1	1	0	1	1	0	1
Washington	1	0	1	4	0	4	11	0	11
Oregon	0	0	0	1	0	1	2	0	2
California	6	1	7	2	0	2	11	0	11
Canal Zone, Panama	0	0	0	1	0	1	0	0	0
Alaska	0	0	0	0	0	0	1	0	1
Total	213	19	232	103	10	*113	216	28	244

* Includes 5 plants (3 in Pennsylvania, 1 in Indiana and 1 in Alabama) which are equipped with Bessemer steel converters, used solely for desiliconizing and decarburizing molten metal for open-hearth steel furnaces.

Of the 232 open-hearth plants, 147 were equipped to make basic steel and 112 to make acid steel. Of the 113 Bessemer plants, 30 were equipped for the standard process and 83 were equipped for the modified process. There were 48 crucible steel plants, 192 electric steel plants, and 4 plants equipped for miscellaneous processes.

ACTIVE STEEL WORKS BY STATES, 1920.

States.	Total active works.	Of these the following made—						
		Open-hearth.		Bessemer.		Cruci- ble.	Elec- tric.	Mis- cel- lane- ous.
		Basic.	Acid.	Stand- ard.	Modi- fied.			
New Hampshire . . .	1	0	0	0	0	0	1	0
Massachusetts	15	2	6	0	2	3	6	0
Rhode Island	2	1	0	0	0	1	0	0
Connecticut	8	2	0	0	2	1	3	1
New York	31	5	3	1	3	8	18	0
New Jersey	11	5	5	0	2	2	4	0
Pennsylvania	131	53	53	10	12	16	37	1
Delaware	5	2	1	0	2	0	0	0
Maryland	4	2	0	1	0	0	2	0
District of Columbia	2	1	2	0	0	0	1	0
Virginia	4	0	0	0	1	0	4	0
West Virginia	7	2	2	2	0	0	1	0
Kentucky	3	2	0	1	0	0	0	0
Tennessee	2	0	1	0	1	0	0	0
South Carolina	1	0	0	0	0	0	1	0
Georgia	3	1	1	0	0	0	1	0
Alabama	5	3	1	1	0	0	1	0
Louisiana	3	0	0	0	2	0	1	0
Texas	3	0	0	0	1	0	2	0
Ohio	63	25	10	8	13	1	22	0
Indiana	14	4	6	1	2	1	4	0
Illinois	30	10	2	4	6	1	11	1
Michigan	13	0	3	0	4	1	7	0
Wisconsin	19	1	4	0	7	0	11	0
Minnesota	8	1	2	0	2	0	3	0
Missouri	6	2	1	0	1	0	2	0
Arkansas	1	0	0	0	0	0	1	0
Iowa	6	2	0	0	1	0	3	0
Nebraska	1	0	0	0	0	0	1	0
Oklahoma	1	0	0	0	0	0	1	0
Colorado	4	1	0	1	0	0	3	0
Utah	3	1	0	0	1	0	1	0
Washington	14	1	0	0	4	0	11	0
Oregon	3	0	0	0	1	1	1	0
California	15	6	0	0	2	0	11	0
Canal Zone, Panama	1	0	0	0	1	0	0	0
Alaska	1	0	0	0	0	0	1	0
Total	444	135	103	*30	73	36	177	3

*Includes 6 plants (3 in Pennsylvania, 1 in Maryland, 1 in Indiana, and 1 in Alabama) which in 1920 used Bessemer converters for duplexing only.

STEEL WORKS ABANDONED OR DISMANTLED IN 1920.

In 1920, 9 plants which were equipped for the manufacture of steel ingots or castings were abandoned. These plants had an approximate annual capacity of 13,750 gross tons.

TOTAL ANNUAL CAPACITY OF COMPLETED STEEL FURNACES
AND CONVERTERS, DECEMBER 31, 1920.

States.	Open-hearth.	Bessemer.	Crucible.	Electric.	Miscellaneous.	Total. Gross tons.
Maine.....	12,000	0	0	0	0	12,000
New Hampshire....	0	0	0	900	0	900
Massachusetts.....	288,300	6,000	1,130	26,000	0	321,430
Rhode Island.....	38,000	0	1,200	0	0	39,200
Connecticut.....	145,000	5,600	4,000	5,000	400	160,000
New York.....	2,483,750	105,980	36,275	147,950	0	2,773,955
New Jersey.....	388,700	17,500	19,450	31,000	0	456,650
Pennsylvania.....	19,407,300	3,975,250	128,120	268,790	800	23,780,260
Delaware.....	392,100	10,600	0	0	2,000	404,700
Maryland.....	452,000	400,000	0	31,500	0	883,500
District of Columbia	43,000	4,000	0	3,050	0	50,050
Virginia.....	0	1,500	0	12,900	0	14,400
West Virginia.....	499,600	478,000	1,000	10,000	0	988,600
Kentucky.....	600,000	190,000	0	0	0	790,000
Tenn., South Car..	3,000	3,000	0	1,800	0	7,800
Georgia, Alabama..	1,433,000	0	0	62,000	0	1,495,000
Louisiana, Texas...	0	3,700	0	3,000	0	6,700
Ohio.....	8,272,750	4,776,300	40	302,840	0	13,351,930
Indiana.....	4,351,450	6,200	1,400	18,800	0	4,377,850
Illinois.....	2,853,990	1,677,660	4,770	227,500	4,500	4,768,420
Michigan.....	34,000	16,500	1,500	58,800	0	110,800
Wisconsin.....	46,900	23,700	0	68,735	0	139,335
Minnesota.....	551,100	1,200	0	10,100	0	562,400
Iowa.....	89,000	1,600	0	5,580	0	96,180
Missouri.....	246,500	3,500	0	14,000	0	264,000
Neb., Okla., Ark...	0	0	0	4,800	0	4,800
Colorado.....	540,000	601,500	0	2,450	0	1,143,950
Utah.....	42,800	1,200	0	1,500	0	45,500
Oregon.....	0	2,500	250	14,000	0	16,750
Washington.....	100,000	6,300	0	17,200	0	123,500
California.....	276,100	7,100	0	36,950	0	320,150
Canal Zone, Alaska.	0	3,600	0	2,500	0	6,100
Total for 1920...	43,590,340	12,329,990	199,135	1,389,645	7,700	*57,516,810
Total for 1919..	42,100,480	12,150,280	208,990	1,169,885	7,500	*55,637,135

*Does not include the capacity of open-hearth furnaces used for melting stock for electric furnaces or for malleable works, Bessemer converters used solely for desilicizing and decarburizing molten metal, electric furnaces used for melting alloys, or electric furnaces used for the manufacture of pig iron or ferro-alloys.

ANNUAL CAPACITY OF OPEN-HEARTH STEEL FURNACES IN THE UNITED STATES, DECEMBER 31, 1920.

States.	No. of plants.	Basic—Gross tons.			Acid—Gross tons.			Total—Gross tons.		
		Ingots.	Castings.	Total.	Ingots.	Castings.	Total.	Ingots.	Castings.	Total.
Maine	1	12,000	0	12,000	0	0	0	12,000	0	12,000
Massachusetts	7	115,000	0	115,000	139,000	34,300	173,300	254,000	34,300	288,300
Rhode Island	1	38,000	0	38,000	0	0	0	38,000	0	38,000
Connecticut	4	125,000	0	125,000	15,000	5,000	20,000	140,000	5,000	145,000
New York	10	2,382,750	50,000	2,432,750	0	51,000	51,000	2,382,750	101,000	2,483,750
New Jersey	8	208,400	30,000	238,400	118,400	31,900	150,300	326,800	61,900	388,700
Pennsylvania	94	17,381,475	196,450	17,577,925	1,262,815	566,560	1,829,375	18,644,290	763,010	19,407,300
Delaware	4	390,000	0	390,000	0	2,100	2,100	390,000	2,100	392,100
Maryland	3	450,000	0	450,000	0	2,000	2,000	450,000	2,000	452,000
District of Columbia	2	30,000	0	30,000	8,000	5,000	13,000	38,000	5,000	43,000
West Virginia	5	444,000	0	444,000	6,000	49,600	55,600	450,000	49,600	499,600
Kentucky	2	600,000	0	600,000	0	0	0	600,000	0	600,000
Tennessee	1	0	0	0	0	3,000	3,000	0	3,000	3,000
Georgia	2	100,000	0	100,000	0	3,000	3,000	100,000	3,000	103,000
Alabama	4	1,315,000	15,000	1,330,000	0	0	0	1,315,000	15,000	1,330,000
Ohio	34	7,944,000	159,750	8,103,750	29,000	140,000	169,000	7,973,000	299,750	8,272,750
Indiana	9	4,252,140	0	4,252,140	0	99,310	99,310	4,252,140	99,310	4,351,450
Illinois	12	2,623,600	213,850	2,837,450	0	16,540	16,540	2,623,600	230,390	2,853,990
Michigan	4	0	7,000	7,000	0	27,000	27,000	0	34,000	34,000
Wisconsin	5	0	8,400	8,400	0	38,500	38,500	0	46,900	46,900
Minnesota	3	540,000	0	540,000	0	11,100	11,100	540,000	11,100	551,100
Iowa	3	12,000	77,000	89,000	0	0	0	12,000	77,000	89,000
Missouri	4	108,000	60,000	228,000	15,000	3,500	18,500	183,000	63,500	246,500
Colorado	1	538,000	2,000	540,000	0	0	0	538,000	2,000	540,000
Utah	1	42,800	0	42,800	0	0	0	42,800	0	42,800
Washington	1	100,000	0	100,000	0	0	0	100,000	0	100,000
California	7	251,000	22,100	273,100	0	3,000	3,000	251,000	25,100	276,100
Total for 1920	232	40,063,165	841,550	40,904,715	1,593,215	1,092,410	2,685,625	41,656,380	1,933,960	43,590,340
Total for 1919	222	38,777,800	805,290	39,583,090	1,547,390	970,000	2,517,390	40,325,190	1,775,290	42,100,480

STEEL FURNACES—CAPACITY—OPEN-HEARTH.

ANNUAL CAPACITY OF BESSEMER STEEL CONVERTERS IN THE UNITED STATES, DECEMBER 31, 1920.

The capacity of Bessemer converters used solely for desilicizing and decarburizing molten metal for open-hearth furnaces is not included.

States.	Standard Bessemer.				Other Bessemer.				Total—Gross tons.			
	No. of plants.	Ingots.	Cast-ings.	Total.	No. of plants.	Ingots.	Castings.	Total.	No. of plants.	Ingots.	Castings.	Total.
Massachusetts.....	0	0	0	0	3	2,250	3,750	6,000	3	2,250	3,750	6,000
Connecticut.....	0	0	0	0	2	0	0	0	2	0	0	0
New York.....	1	100,000	0	100,000	4	0	5,600	5,600	5	100,000	5,600	5,600
New Jersey.....	0	0	0	0	2	0	5,980	5,980	2	0	17,500	17,500
Pennsylvania.....	10	3,925,000	0	3,925,000	14	0	17,500	17,500	24	3,925,000	17,500	3,975,250
Delaware.....	0	0	0	0	3	0	50,250	50,250	3	0	10,600	10,600
Maryland.....	1	400,000	0	400,000	0	0	10,600	10,600	0	400,000	0	400,000
District of Columbia.....	0	0	0	0	1	0	0	0	1	4,000	4,000	4,000
Virginia.....	0	0	0	0	2	0	4,000	4,000	2	0	1,500	1,500
West Virginia.....	2	477,750	250	478,000	0	0	1,500	1,500	0	477,750	250	478,000
Kentucky.....	1	190,000	0	190,000	0	0	0	0	1	190,000	0	190,000
Tennessee.....	0	0	0	0	1	0	3,000	3,000	1	0	3,000	3,000
Louisiana, Texas.....	0	0	0	0	3	0	3,700	3,700	3	0	3,700	3,700
Alabama.....	1	0	0	0	0	0	0	0	1	0	0	0
Ohio.....	8	4,731,000	0	4,731,000	14	0	45,300	45,300	22	4,731,000	45,300	4,776,300
Indiana.....	1	0	0	0	2	0	6,200	6,200	3	0	6,200	6,200
Illinois.....	4	1,652,800	0	1,652,800	7	0	24,860	24,860	11	1,652,800	24,860	1,677,660
Michigan.....	0	0	0	0	4	0	16,500	16,500	4	0	16,500	16,500
Wisconsin.....	0	0	0	0	7	0	23,700	23,700	7	0	23,700	23,700
Minnesota.....	0	0	0	0	2	0	1,200	1,200	2	0	1,200	1,200
Iowa, Missouri.....	0	0	0	0	2	0	5,100	5,100	2	0	5,100	5,100
Colorado.....	1	600,000	0	600,000	1	0	1,500	1,500	2	600,000	1,500	601,500
Utah, Washington.....	0	0	0	0	5	0	7,500	7,500	5	0	7,500	7,500
Oregon.....	0	0	0	0	1	0	2,500	2,500	1	0	2,500	2,500
California.....	0	0	0	0	2	0	7,100	7,100	2	0	7,100	7,100
Canal Zone, Panama.....	0	0	0	0	1	0	3,600	3,600	1	0	3,600	3,600
Total for 1920....	30	12,076,550	250	12,076,800	83	2,250	250,940	253,190	113	12,078,800	251,190	12,329,990
Total for 1919 ..	30	11,883,750	250	11,884,000	86	2,850	263,430	266,280	116	11,886,600	263,680	12,150,280

ANNUAL CAPACITY OF CRUCIBLE STEEL FURNACES, DEC. 31, 1920.

States.	No. of plants.	Annual capacity—Gross tons.		
		Ingots.	Castings.	Total.
Massachusetts.....	6	125	1,005	1,130
Rhode Island, Connecticut.....	2	3,600	1,600	5,200
New York.....	8	36,100	175	36,275
New Jersey.....	4	17,950	1,500	19,450
Pennsylvania.....	21	128,120	0	128,120
West Virginia.....	1	1,000	0	1,000
Ohio.....	1	0	40	40
Indiana.....	2	0	1,400	1,400
Illinois.....	1	4,770	0	4,770
Michigan.....	1	0	1,500	1,500
Oregon.....	1	0	250	250
Total for 1920.....	48	191,665	7,470	199,135
Total for 1919.....	57	200,295	8,695	208,990

ANNUAL CAPACITY OF ELECTRIC STEEL FURNACES, DEC. 31, 1920.

States.	No. of plants.	Annual capacity—Gross tons.		
		Ingots.	Castings.	Total.
Massachusetts.....	6	9,500	16,500	26,000
New Hampshire, Connecticut.....	4	2,300	3,600	5,900
New York.....	20	117,700	30,250	147,950
New Jersey.....	4	26,750	4,250	31,000
Pennsylvania.....	40	200,390	68,400	268,790
Maryland.....	2	30,000	1,500	31,500
District of Columbia.....	2	1,850	1,200	3,050
Virginia.....	4	6,800	6,100	12,900
West Virginia, South Carolina.....	2	10,000	1,800	11,800
Georgia, Alabama.....	2	15,000	47,000	62,000
Louisiana, Texas.....	3	1,200	1,800	3,000
Ohio.....	24	226,120	76,720	302,840
Indiana.....	6	0	18,800	18,800
Illinois.....	12	154,700	72,800	227,500
Michigan.....	10	26,500	32,300	58,800
Wisconsin.....	12	27,000	41,735	68,735
Minnesota.....	3	0	10,100	10,100
Iowa.....	3	0	5,580	5,580
Missouri, Nebraska, Arkansas.....	4	0	18,200	18,200
Oklahoma, Colorado, Utah.....	5	0	4,550	4,550
Washington.....	11	550	16,650	17,200
Oregon, California, Alaska.....	13	18,620	34,830	53,450
Total for 1920.....	192	874,980	514,665	1,389,645
Total for 1919.....	165	781,320	388,565	1,169,885

Miscellaneous—1920 : 4 plants : ingots, 400 tons ; castings, 7,300 tons : total, 7,700 tons.

ROLLED IRON AND STEEL.

In 1920 the production of all kinds of iron and steel rolled into finished forms (including blooms, billets, and axle blanks rolled for forging purposes and semi-finished products which were rolled for export in that year) shows an increase of 7,246,319 tons, or 28.87 per cent., as compared with 1919.

TOTAL PRODUCTION OF ALL KINDS OF FINISHED ROLLED IRON AND STEEL, 1887-1920.

Year.	Iron and steel rails.	Plates and sheets.	Nail plate.	Wire rods.	Structural shapes.	All other finished rolled products.	Total. Gross tons.
1887.	2,139,640	603,355	308,432	.....	.....	2,184,279	5,235,706
1888.	1,403,700	609,827	289,891	279,769	.....	2,034,162	4,617,349
1889.	1,522,204	716,496	259,409	363,851	.....	2,374,968	5,236,928
1890.	1,885,307	809,981	251,828	457,099	.....	2,618,660	6,022,875
1891.	1,307,176	678,927	223,312	536,607	.....	2,644,941	5,390,963
1892.	1,551,844	751,460	201,242	627,829	453,957	2,579,482	6,165,814
1893.	1,136,458	674,345	136,113	537,272	387,307	2,104,190	4,975,685
1894.	1,021,772	682,900	108,262	673,402	360,305	1,795,570	4,642,211
1895.	1,306,135	991,459	95,085	791,130	517,920	2,487,845	6,189,574
1896.	1,122,010	965,776	72,137	623,986	495,571	2,236,361	5,515,841
1897.	1,647,892	1,207,286	94,054	970,736	583,790	2,497,970	7,001,728
1898.	1,981,241	1,448,301	70,188	1,071,683	702,197	3,239,760	8,513,370
1899.	2,272,700	1,903,505	85,015	1,036,398	850,376	4,146,425	10,294,419
1900.	2,385,682	1,794,528	70,245	846,291	815,161	3,575,536	9,487,443
1901.	2,874,639	2,254,425	68,850	1,365,934	1,013,150	4,772,329	12,349,327
1902.	2,947,933	2,665,409	72,936	1,574,293	1,300,326	5,383,219	13,944,116
1903.	2,992,477	2,599,665	64,102	1,503,455	1,095,813	4,952,185	13,207,697
1904.	2,284,711	2,421,398	61,601	1,699,028	949,146	4,597,497	12,013,381
1905.	3,375,929	3,532,230	64,542	1,808,688	1,660,519	6,398,107	16,840,015
1906.	3,977,887	4,182,156	54,211	1,871,614	2,118,772	7,383,828	19,588,468
1907.	3,633,654	4,248,832	52,027	2,017,583	1,940,352	7,972,374	19,864,822
1908.	1,921,015	2,649,693	45,747	1,816,949	1,083,181	4,311,608	11,828,192
1909.	3,023,845	4,234,346	63,746	2,335,685	2,275,562	7,711,506	19,644,690
1910.	3,636,031	4,955,484	45,294	2,241,830	2,266,890	8,475,750	21,621,279
1911.	2,822,790	4,488,049	48,522	2,450,453	1,912,367	7,316,990	19,039,171
1912.	3,327,915	5,875,080	45,331	2,653,553	2,846,487	9,908,475	24,656,841
1913.	3,502,780	5,751,037	37,503	2,464,807	3,004,972	10,030,144	24,791,243
1914.	1,945,095	4,719,246	38,573	2,431,714	2,031,124	7,204,444	18,370,196
1915.	2,204,203	6,077,694	31,929	3,095,907	2,437,003	10,546,188	24,392,924
1916.	2,854,518	7,453,980	30,088	3,518,746	3,029,964	15,493,093	32,380,389
1917.	2,944,161	8,267,616	22,864	3,137,138	3,110,000	15,585,921	33,067,700
1918.	2,540,892	8,799,135	18,310	2,562,390	2,849,969	14,385,058	31,155,754
1919.	2,203,843	7,372,814	12,832	2,538,476	2,614,036	10,359,543	25,101,544
1920.	2,604,116	9,337,680	20,577	3,136,907	3,306,748	13,941,835	32,347,863

Rolled blooms and billets for forging purposes are included from 1905, while semi-finished products rolled for export are included for 1912 and subsequent years. Prior to 1892 structural shapes were included in "all other finished rolled products."

PRODUCTION OF ALL KINDS OF FINISHED ROLLED IRON AND STEEL, GROSS TONS, 1905-1920.

Year.	Iron and steel rails.	Plates and sheets.	Nail and spike plate.	Wire rods.	Structural shapes.	Merchant bars *	Skelp, flue, and pipe iron or steel.	Hoops.	Bands, cotton-ties.	Long angle splice bars, tie-plate etc.†	Rolled sheet piling, not including fabrications.	Rail-ties.	Rolled forging blooms, and sheet billets, etc.	Blooms, slabs, billets, and sheet bars for export.†	All other finished rolled products.	Total. Gross tons.
1905.	3,375,929	3,532,230	64,542	1,808,688	1,660,519	3,593,601	1,435,995	445,527	...	...	...	...	41,754	881,230	16,840,015	
1906.	3,977,887	4,182,156	54,211	1,871,614	2,118,772	3,992,200	1,528,585	172,332	408,018	...	...	...	206,110	1,076,583	19,588,468	
1907.	3,633,654	4,248,832	52,027	2,017,583	1,940,352	3,970,988	1,802,627	200,168	474,179	...	...	...	227,782	1,296,630	19,864,822	
1908.	1,921,015	2,649,693	45,747	1,816,949	1,083,181	1,986,638	1,150,583	170,860	238,441	...	...	...	121,321	643,765	11,828,193	
1909.	3,023,845	4,234,346	63,746	2,335,085	2,275,562	3,422,883	2,033,381	250,179	395,333	...	...	...	341,773	1,267,957	19,644,690	
1910.	3,636,031	4,955,484	45,294	2,241,830	2,266,890	4,026,840	1,828,194	262,214	424,979	...	26,598	49,048	459,933	1,397,944	21,621,279	
1911.	2,822,790	4,488,049	48,522	2,450,453	1,912,367	3,306,103	1,980,673	225,074	342,810	...	22,827	39,197	231,115	1,169,191	19,039,171	
1912.	3,327,915	5,875,080	45,331	2,653,553	2,846,457	3,971,440	2,446,816	270,007	587,395	571,772	22,276	41,396	462,476	347,783	1,187,108	24,656,841
1913.	3,502,780	5,751,037	37,503	2,464,807	3,004,972	4,277,279	2,501,964	280,886	499,660	686,390	46,289	44,244	537,210	88,778	1,067,444	24,791,243
1914.	1,945,095	4,719,246	38,572	2,431,714	2,031,124	2,812,102	1,982,431	211,028	345,919	423,052	35,314	33,249	331,524	91,907	937,918	18,370,196
1915.	2,204,203	6,077,694	31,922	3,095,907	2,437,003	4,484,650	2,299,464	281,759	437,987	535,615	24,026	42,269	650,545	562,418	1,227,455	24,392,924
1916.	2,854,518	7,453,980	30,088	3,518,746	3,029,964	6,691,702	2,927,674	368,164	562,555	691,820	19,196	34,311	2,015,960	512,483	1,669,228	32,380,389
1917.	2,944,161	8,267,616	22,864	3,137,138	3,110,000	6,681,141	2,674,231	347,186	490,893	606,824	18,606	9,103	1,801,708	1,158,427	1,797,802	33,067,700
1918.	2,540,892	8,799,135	18,310	2,562,390	2,849,969	6,587,369	2,564,011	262,281	250,767	416,905	11,689	6,438	1,659,118	832,746	1,793,734	31,155,754
1919.	2,203,843	7,372,814	12,832	2,538,476	2,614,036	4,810,645	2,555,778	233,336	352,172	434,008	17,811	16,645	359,582	92,143	1,487,423	25,101,544
1920.	2,604,116	9,337,680	20,577	3,136,907	3,306,748	6,702,685	3,220,280	333,440	388,862	575,830	20,716	26,310	447,334	136,457	2,089,912	32,347,863

* Including concrete reinforcing bars.

† Not ascertained prior to 1912.

‡ Not ascertained prior to 1910.

**PRODUCTION OF FINISHED ROLLED PRODUCTS, SHOWING IRON
AND STEEL PRODUCTS SEPARATELY, GROSS TONS, 1909-1920.**

Years.	Iron.	Steel.	Total.	Years.	Iron.	Steel.	Total.
1909.	1,709,431	17,935,259	19,644,690	1915.	1,294,833	23,098,091	24,392,924
1910.	1,740,156	19,881,123	21,621,279	1916.	1,822,571	30,557,818	32,380,389
1911.	1,460,615	17,578,556	19,039,171	1917.	1,867,757	31,199,943	33,067,700
1912.	1,637,582	23,019,259	24,656,841	1918.	1,573,976	29,581,778	31,155,754
1913.	1,678,257	23,112,986	24,791,243	1919.	1,059,451	24,042,093	25,101,544
1914.	1,167,776	17,202,420	18,370,196	1920.	1,377,566	30,970,297	32,347,863

**PRODUCTION OF ALL KINDS OF FINISHED ROLLED IRON AND
STEEL, BY STATES, GROSS TONS, 1916-1920.**

States.	1916.	1917.	1918.	1919.	1920.
Maine, Massachusetts. . .	217,589	218,962	181,113	203,033	225,479
Rhode Island, Conn. . . .	75,111	81,255	81,317	79,523	105,051
New York.	1,322,988	1,492,769	1,640,182	974,928	1,562,058
New Jersey.	235,739	238,972	217,480	204,180	218,903
Pennsylvania.	15,428,563	15,018,871	13,836,445	11,477,176	13,718,265
Delaware, Virginia.	37,337	62,403	41,584	79,279	103,438
Maryland.	385,708	368,458	416,213	241,914	458,577
West Virginia.	777,328	831,594	731,477	682,017	957,242
Kentucky, North Car., Tennessee, Ga., Texas. }	332,797	322,444	239,224	184,675	306,822
Alabama.	856,445	884,500	755,468	709,697	896,418
Ohio.	5,846,024	6,141,465	6,171,332	4,975,254	6,454,004
Indiana.	2,919,004	3,135,689	2,844,429	2,607,547	3,499,855
Illinois.	2,686,674	2,713,428	2,470,223	1,679,107	2,487,085
Michigan, Wis., Minn. . .	471,802	696,605	733,038	414,602	514,768
Mo., Iowa, Okla., Kan. .	150,603	146,386	115,085	103,803	151,772
Colorado, Utah, Wash. . .	518,043	573,660	514,170	355,138	490,609
California, Canal Zone. . .	118,634	140,239	166,974	129,671	197,517
Total.	32,380,389	33,067,700	31,155,754	25,101,544	32,347,863

**PRODUCTION OF ALL KINDS OF FINISHED ROLLED IRON AND
STEEL IN PENNSYLVANIA, BY DISTRICTS, 1916-1920.**

Districts—Gross tons.	1916.	1917.	1918.	1919.	1920.
Philadelphia County. . .	161,531	117,806	107,591	81,295	96,170
Lehigh Valley.	842,502	893,990	794,209	722,286	853,300
Schuylkill Valley.	1,002,650	970,553	851,436	676,857	793,361
Eastern Pennsylvania. . .	572,001	629,894	580,784	392,204	500,081
Upper Susq. Valley. . . .	234,414	224,310	198,913	141,853	187,569
Lower Susq. Valley. . . .	869,094	692,250	762,092	424,224	614,419
Juniata Valley.	101,340	126,582	128,040	106,458	100,284
Allegheny County.	7,244,405	6,934,827	6,881,129	5,859,709	6,654,686
Shenango Valley.	1,393,576	1,367,553	1,082,790	1,157,825	1,328,981
Western Pennsylvania. . .	3,007,050	3,061,106	2,449,461	1,914,465	2,589,414
Total.	15,428,563	15,018,871	13,836,445	11,477,176	13,718,265

**PRODUCTION OF ALL KINDS OF FINISHED ROLLED IRON AND
STEEL IN OHIO, BY DISTRICTS, 1916-1920.**

Districts—Gross tons.	1916.	1917.	1918.	1919.	1920.
Mahoning Valley.....	2,371,813	2,712,732	2,683,208	2,029,660	2,814,495
Lake Counties	1,729,005	1,709,071	1,861,089	1,475,109	1,886,598
Hanging Rock and Interior Counties...}	1,057,919	1,052,657	1,065,595	1,044,568	1,195,614
Ohio River Counties...	687,287	667,005	561,440	425,917	557,297
Total.....	5,846,024	6,141,465	6,171,332	4,975,254	6,454,004

**PRODUCTION OF FINISHED ROLLED FORMS BY STATES, 1919-
1920, SHOWING IRON AND STEEL SEPARATELY.**

States.	1919—Gross tons.			1920—Gross tons.		
	Iron.	Steel.	Total.	Iron.	Steel.	Total.
Me., Mass.....	19,164	183,869	203,033	17,041	208,438	225,479
R. I., Conn....	6,230	73,293	79,523	8,893	96,158	105,051
New York.....	46,047	928,881	974,928	62,184	1,499,874	1,562,058
New Jersey...	31,417	172,763	204,180	33,338	185,565	218,903
Pennsylvania..	470,811	11,006,365	11,477,176	621,097	13,097,168	13,718,265
Delaware, Va..	13,468	65,811	79,279	8,405	95,033	103,438
Maryland.....	1,686	240,228	241,914	1,631	456,946	458,577
West Virginia.....		682,017	682,017		957,242	957,242
Ky., Tenn., N. C., Ga., Tex. }	32,111	152,564	184,675	47,856	258,966	306,822
Alabama.....	1,694	708,003	709,697	2,782	893,636	896,418
Ohio.....	127,926	4,847,328	4,975,254	129,201	6,324,803	6,454,004
Indiana.....	138,005	2,469,542	2,607,547	217,366	3,282,489	3,499,855
Illinois.....	73,414	1,605,693	1,679,107	111,056	2,376,029	2,487,085
Mich., Wis., Mn.	5,157	409,445	414,602	3,706	511,062	514,768
Mo., Iowa, Ok.	70,158	33,645	103,803	98,655	53,117	151,772
Colorado, Utah, Washington. }	4,192	350,946	355,138	162	490,447	490,609
California, Ca- nal Zone.... }	17,971	111,700	129,671	14,193	183,324	197,517
Total.....	1,059,451	24,042,093	25,101,544	1,377,566	30,970,297	32,347,863

Of the total production in 1920 about 95.7 per cent. was rolled from steel, as compared with about 95.8 per cent. in 1919.

Of the total production in 1920, 42.41 per cent. was rolled in Pennsylvania, as compared with 45.72 per cent. in 1919; and in 1920, 19.95 per cent. was rolled in Ohio, as compared with 19.82 per cent. in the previous year.

In 1920 there were 417 plants in 30 States and the Canal Zone, Panama, which rolled finished forms of iron or steel, as compared with 402 plants in 30 States in 1919.

PRODUCTION OF FINISHED ROLLED IRON AND STEEL BY
LEADING PRODUCTS, GROSS TONS, 1920.

Products.	Iron.	Steel.	Total.
Rails.....		2,604,116	2,604,116
Plates and sheets.....	34,111	9,303,569	9,337,680
Nail and spike plate.....		20,577	20,577
Wire rods.....	4,721	3,132,186	3,136,907
Structural shapes.....	488	3,306,260	3,306,748
Merchant bars.....	663,032	5,467,208	6,130,240
Bars for reinforced concrete work.....	698	571,747	572,445
Skelp, flue, and pipe iron or steel.....	252,403	2,967,886	3,220,289
Hoops.....		333,440	333,440
Bands and cotton-ties.....	3,345	385,517	388,862
Long angle splice bars, tie-plate bars, etc....	53,636	522,194	575,830
Rolled sheet piling, not including fabricated..		20,716	20,716
Railroad ties.....		26,310	26,310
Rolled forging blooms, forging billets, etc....	258	447,076	447,334
Blooms, billets, sheet bars, etc., for export...		136,457	136,457
All other finished rolled products.....	364,874	1,725,038	2,089,912
Total.....Gross tons.	1,377,566	30,970,297	32,347,863

In addition to the 20,716 tons of rolled sheet piling above reported there were produced by rolling mills and steel works in 1920 about 3,941 tons of fabricated sheet piling, as compared with 3,773 tons of the same kind of piling in 1919.

PRODUCTION OF RAILS.

PRODUCTION OF RAILS BY PROCESSES, GROSS TONS.

Years.	Open-hearth.	Bessemer.	Rerolled.*	Electric.	Iron.	Total.
1906.....	186,413	3,791,459	.....	.....	15	3,977,887
1907.....	252,704	3,380,025	.....	.....	925	3,633,654
1908.....	571,791	1,349,153	.....	.....	71	1,921,015
1909.....	1,256,674	1,767,171	.....	†	.....	3,023,845
1910.....	1,751,359	1,884,442	.....	†	230	3,636,031
1911.....	1,676,923	1,053,420	91,751	462	234	2,822,790
1912.....	2,105,144	1,099,926	119,390	3,455	.....	3,327,915
1913.....	2,527,710	817,591	155,043	2,436	.....	3,502,780
1914.....	1,525,851	323,897	95,169	178	.....	1,945,095
1915.....	1,775,168	326,952	102,083	.....	.....	2,204,203
1916.....	2,269,600	440,092	144,826	.....	.....	2,854,518
1917.....	2,292,197	533,325	118,639	.....	.....	2,944,161
1918.....	1,945,443	494,193	101,256	.....	.....	2,540,892
1919.....	1,893,250	214,121	96,422	50	.....	2,203,843
1920.....	2,334,222	142,899	126,698	297	.....	2,604,116

* Rerolled from old steel rails. Included with Bessemer and open-hearth steel rails from 1906 to 1910 inclusive. † Small tonnages rolled in 1909 and 1910 but included with Bessemer and open-hearth rails for these years.

**PRODUCTION OF RAILS, SHOWING INCREASE OR DECREASE
BY PROCESSES, 1919-1920.**

Kinds.	1919.	Per cent.	1920.	Per cent.	Increase.	Per cent.
Open-hearth.....	1,893,250	85.91	2,334,222	89.63	440,972	23.29
Bessemer.....	214,121	9.71	142,899	5.49	*71,222	*33.26
All other.....	96,472	4.38	126,995	4.88	30,523	31.64
Total.....	2,203,843	100.00	2,604,116	100.00	400,273	18.16

* Decrease.

Girder and high T rails for electric and street railways are included in the figures given above. For recent years the tonnage was as follows: 1915, 133,965; 1916, 127,410; 1917, 91,674; 1918, 20,834; 1919, 112,712; 1920, 100,910 gross tons.

PRODUCTION OF RENEWED AND REROLLED RAILS, 1913-1920.

Years.	Rerolled from new seconds, new defective rails, etc.			Rolled from old rails.	Total rerolled.
	Open-hearth.	Bessemer.	Total.		
1913...	13,052	30,741	43,793	155,043	198,836
1914...	13,538	13,234	26,772	95,169	121,941
1915...	6,477	2,652	9,129	102,083	111,212
1916...	1,711	2,149	3,860	144,826	148,686
1917...	1,825	7,182	9,007	118,639	127,646
1918...	13,296	19,462	32,758	101,256	134,014
1919...	1,933	5,766	7,699	96,422	104,121
1920...	19,493	1,979	21,472	126,698	148,170

PRODUCTION OF RAILS BY WEIGHT PER YARD, 1905-1920.

Years.	Under 45 pounds	45 and less than 85.	85 and less than 100.	100 pounds and over.	Total. Gross tons.
1905.....	228,252	1,601,624		1,546,053	3,375,929
1906.....	284,612	1,749,650		1,943,625	3,977,887
1907.....	295,838	1,569,985		1,767,831	3,633,654
1908.....	183,869	687,632		1,049,514	1,921,015
1909.....	255,726	1,024,856		1,743,263	3,023,845
1910.....	260,709	1,275,339		2,099,983	3,636,031
1911.....	218,758	1,067,696		1,536,336	2,822,790
1912.....	248,672	1,118,592		1,960,651	3,327,915
1913.....	*270,405	†967,313		2,265,062	3,502,780
1914.....	*238,423	†309,865	868,104	528,703	1,945,095
1915.....	*254,101	†518,291	742,816	688,995	2,204,203
1916.....	*295,535	†566,791	1,225,341	766,851	2,854,518
1917.....	*308,258	†882,673	989,704	763,526	2,944,161
1918.....	*395,124	†665,165	888,141	592,462	2,540,892
1919.....	*263,803	†495,577	965,571	478,892	2,203,843
1920.....	*489,043	†433,333	952,622	729,118	2,604,116

* Includes rails under 50 pounds. † Includes 50 pounds and less than 85 pounds.

PRODUCTION OF RAILS BY WEIGHTS AND PROCESSES, 1920.

Kinds.	Under 50 lbs.		50 to 84 lbs.		85 to 99 lbs.		100 lbs. & over.		Total.	
	Gross tons.	Per cent.	Gross tons.	Per cent.	Gross tons.	Per cent.	Gross tons.	Per cent.	Gross tons.	Per cent.
O. H. .	337,250	68.96	363,201	83.82	907,017	95.21	726,754	99.68	2,334,222	89.63
Bess. .	41,424	8.47	70,132	16.18	28,979	3.04	2,364	.32	142,899	5.49
Other.	110,369	22.57	.....	.....	16,626	1.75	.....	.....	126,995	4.88
Total.	489,043	100.00	433,333	100.00	952,622	100.00	729,118	100.00	2,604,116	100.00

Included above is the annual production of alloy-treated rails, shown separately in the following tables.

PRODUCTION OF ALLOY-TREATED STEEL RAILS, 1910-1920.

Years.	Total production. Gross tons.	Production by alloys.		Production by processes.		Production by weight per yard.			
		Titanium.	Other alloys.	Open-hearth and elect.	Besse-mer.	Under 45 lbs.	45 and under 85 lbs.	85 and under 100 lbs.	100 lbs. and over.
1910. .	257,324	256,759	565	27,389	229,935	..	70,170	187,154	
1911. .	153,989	152,990	999	38,539	115,450	..	27,097	126,892	
1912. .	149,267	141,773	7,494	40,393	108,874	21	5,426	143,820	
1913. .	59,519	47,655	11,864	33,567	25,952	*91	†9,414	50,014	
1914. .	27,937	23,321	4,616	27,447	490	*14	†1,168	8,301	18,454
1915. .	24,970	21,191	3,779	24,367	603	*6	†1,977	6,555	16,432
1916. .	28,562	26,493	2,069	27,675	887	..	†1,761	10,506	16,295
1917. .	16,535	15,273	1,262	16,535	.....	..	†335	6,671	9,529
1918. .	3,111	2,891	220	3,111	.....	..	†47	2,640	424
1919. .	6,476	6,207	269	6,476	.....	..	.....	3,920	2,556
1920. .	12,909	11,652	1,257	12,909	.....	..	†514	5,069	7,326

* Includes rails under 50 pounds. † Includes 50 pounds and less than 85 pounds.

PRODUCTION OF ALLOY-TREATED STEEL RAILS, 1920.

Alloys.	Total production.	Production by processes.		Production by weight per yard.			
		Open-hearth.	Besse-mer.	Under 50 lbs.	50 lbs. to 84 lbs.	85 lbs. to 99 lbs.	100 lbs. and over.
Titanium.	11,652	11,652	....	....	514	4,600	6,538
Manganese.	1,257	1,257	....	....	....	469	788
Total.	12,909	12,909	....	....	514	5,069	7,326

PRODUCTION OF RAILS IN PENNSYLVANIA, 1911-1920.

Years	Open-hearth.	Besse-mer.	Total.	Years	Open-hearth.	Besse-mer.	All other.	Total.
1911.	477,228	352,331	*839,663	1916	457,502	186,169	64,180	707,851
1912.	526,755	343,837	*888,672	1917	411,202	324,315	33,902	769,419
1913.	618,795	326,819	*971,820	1918	350,100	365,825	31,876	747,801
1914.	423,426	142,662	*592,532	1919	387,747	200,873	41,719	630,339
1915.	494,595	162,575	*694,545	1920	563,869	140,876	43,451	748,196

* Includes 10,104 tons of "all other" rails in 1911, 18,080 tons in 1912, 26,206 tons in 1913, 26,444 tons in 1914, and 37,375 tons in 1915.

APPROXIMATE CONSUMPTION OF RAILS, 1874-1920.

Years.	Production—Gross tons.			Imports.	Exports.	Approximate consumption.
	Iron.	Steel.	Total.			
1874.....	521,848	129,414	651,262	96,706	1,122	746,846
1875.....	447,901	259,699	707,600	17,364	1,080	723,884
1876.....	417,114	368,269	785,383	256	3,180	782,459
1877.....	296,911	385,865	682,776	31	6,647	676,160
1878.....	288,295	499,817	788,112	9	8,354	779,767
1879.....	375,143	618,850	993,993	39,417	3,066	1,030,344
1880.....	440,859	864,353	1,305,212	259,543	958	1,563,797
1881.....	436,233	1,210,285	1,646,518	344,929	611	1,990,836
1882.....	203,459	1,304,392	1,507,851	200,113	3,220	1,704,744
1883.....	57,994	1,156,911	1,214,905	34,801	2,308	1,247,398
1884.....	22,821	999,367	1,022,188	2,829	6,034	1,018,983
1885.....	13,228	963,750	976,978	2,189	7,757	971,410
1886.....	21,142	1,579,395	1,600,537	41,587	2,644	1,639,480
1887.....	20,591	2,119,049	2,139,640	137,830	549	2,276,921
1888.....	12,725	1,390,975	1,403,700	63,037	6,908	1,459,829
1889.....	9,159	1,513,045	1,522,204	6,217	9,325	1,519,096
1890.....	13,882	1,871,425	1,885,307	204	16,947	1,868,564
1891.....	8,240	1,298,936	1,307,176	253	11,239	1,296,190
1892.....	10,437	1,541,407	1,551,844	347	7,982	1,544,209
1893.....	6,090	1,130,368	1,136,458	2,888	19,876	1,119,470
1894.....	4,674	1,017,098	1,021,772	300	13,556	1,008,516
1895.....	5,810	1,300,325	1,306,135	1,447	15,599	1,291,983
1896.....	4,347	1,117,663	1,122,010	7,796	73,131	1,056,675
1897.....	2,872	1,645,020	1,647,892	415	148,221	1,500,086
1898.....	3,319	1,977,922	1,981,241	200	301,903	1,679,538
1899.....	1,592	2,271,108	2,272,700	2,134	277,714	1,997,120
1900.....	695	2,384,987	2,385,682	1,448	361,619	2,025,511
1901.....	1,730	2,872,909	2,874,639	1,905	318,956	2,557,588
1902.....	6,512	2,941,421	2,947,933	63,522	67,666	2,943,789
1903.....	667	2,991,810	2,992,477	95,555	30,837	3,057,195
1904.....	871	2,283,840	2,284,711	37,776	416,250	1,906,237
1905.....	318	3,375,611	3,375,929	17,278	295,023	3,098,184
1906.....	15	3,977,872	3,977,887	4,943	328,036	3,654,794
1907.....	925	3,632,729	3,633,654	3,752	338,906	3,298,500
1908.....	71	1,920,944	1,921,015	1,719	196,510	1,726,224
1909.....	none.	3,023,845	3,023,845	1,542	299,540	2,725,847
1910.....	230	3,635,801	3,636,031	7,861	353,180	3,290,712
1911.....	234	2,822,556	2,822,790	3,414	420,874	2,405,330
1912.....	none.	3,327,915	3,327,915	3,780	446,473	2,885,222
1913.....	none.	3,502,780	3,502,780	10,408	460,553	3,052,635
1914.....	none.	1,945,095	1,945,095	22,571	174,680	1,792,986
1915.....	none.	2,204,203	2,204,203	78,525	391,379	1,891,349
1916.....	none.	2,854,518	2,854,518	26,299	540,828	2,339,989
1917.....	none.	2,944,161	2,944,161	9,263	512,669	2,440,755
1918.....	none.	2,540,892	2,540,892	8,705	453,537	2,096,060
1919.....	none.	2,203,843	2,203,843	17,008	652,443	1,568,408
1920.....	none.	2,604,116	2,604,116	45,684	594,628	2,055,172

PRODUCTION OF STRUCTURAL SHAPES.

PRODUCTION OF STRUCTURAL SHAPES, GROSS TONS, 1894-1920.

Years.	Tons.	Years.	Tons.	Years.	Tons.
1894.....	360,305	1903.....	1,095,813	1912.....	2,846,487
1895.....	517,920	1904.....	949,146	1913.....	3,004,972
1896.....	495,571	1905.....	1,660,519	1914.....	2,031,124
1897.....	583,790	1906.....	2,118,772	1915.....	2,437,003
1898.....	702,197	1907.....	1,940,352	1916.....	3,029,964
1899.....	850,376	1908.....	1,083,181	1917.....	3,110,000
1900.....	815,161	1909.....	2,275,562	1918.....	2,849,969
1901.....	1,013,150	1910.....	2,266,890	1919.....	2,614,036
1902.....	1,300,326	1911.....	1,912,367	1920.....	3,306,748

Prior to 1912 the output of heavy structural shapes was not separated from the output of light structural shapes. In the statistics for 1910 and 1911 the production of small angles, small channels, and other similar light structural forms for use in the manufacture of bedsteads, safes, fences, etc., was not included in the total output of structural shapes, but was included for 1909 and some prior years.

The figures given for heavy structural shapes for 1912 and subsequent years include all beams, tees, zee bars, angles, channels, etc., having one leg or web of 3 inches and over and a thickness of $\frac{1}{4}$ inch and over, which were rolled for structural or fabricating purposes, while the figures given for light structural shapes include only such light shapes and small angles, etc., as were rolled for use in the manufacture of bedsteads, agricultural implements, fences, safes, vaults, or for other fabricating purposes having a section smaller than the heavy shapes as defined above. The production of iron and steel plates, girders made from plates, merchant bars, bars for reinforced concrete, sheet piling, etc., all of which are provided for elsewhere, is not included in any of the figures given for structural shapes.

PRODUCTION OF HEAVY AND LIGHT STRUCTURAL SHAPES, GROSS TONS, 1912-1920.

Years.	Heavy shapes.	Light shapes.	Total.	Years.	Heavy shapes.	Light shapes.	Total.
1912..	2,470,415	376,072	2,846,487	1917..	2,575,810	534,190	3,110,000
1913..	2,553,806	451,166	3,004,972	1918..	2,438,126	411,843	2,849,969
1914..	1,787,281	243,843	2,031,124	1919..	2,136,424	477,612	2,614,036
1915..	2,031,407	405,596	2,437,003	1920..	2,741,120	565,628	3,306,748
1916..	2,649,961	380,003	3,029,964	.....	.....	.....	.....

Almost all the heavy structural shapes were rolled from steel.

In 1920, 49 works in 11 States rolled heavy or light structural shapes, namely: New York, 4; Pennsylvania, 20; Alabama, 2; Ohio, 5; Indiana, 5; Illinois, 5; Wisconsin, 2; Minnesota, 1; Colorado, 1; Washington, 1; and California, 3. In 1919, 52 works in 12 States rolled structural shapes. Pennsylvania made 65.7 per cent. of the total in 1920, against 68.9 per cent. in 1919.

PRODUCTION AND APPROXIMATE CONSUMPTION OF STRUCTURAL SHAPES, GROSS TONS, 1902-1920.

Years.	Production of structural shapes.			Add imports.	Deduct exports.	Consumption.
	Iron.	Steel.	Total.			
1902	1,300,326		1,300,326	*	53,859	1,246,467
1903	1,095,813		1,095,813	8,865	30,641	1,074,037
1904	8,019	941,127	949,146	7,203	55,514	900,835
1905	11,630	1,648,889	1,660,519	16,147	84,234	1,592,432
1906	4,719	2,114,053	2,118,772	28,573	112,555	2,034,790
1907	3,973	1,936,379	1,940,352	2,294	138,442	1,804,204
1908	2,423	1,080,758	1,083,181	3,623	116,881	969,923
1909	44,814	2,230,748	2,275,562	6,146	90,830	2,190,878
1910	426	2,266,464	†2,266,890	14,897	146,721	2,135,066
1911	811	1,911,556	†1,912,367	5,343	223,493	1,694,217
1912	5,517	2,840,970	2,846,487	3,120	288,164	2,561,443
1913	3,841	3,001,131	3,004,972	11,659	403,264	2,613,367
1914	1,981	2,029,143	2,031,124	10,145	182,395	1,858,874
1915	1,858	2,435,145	2,437,003	1,494	232,139	2,206,358
1916	1,823	3,028,141	3,029,964	1,473	300,594	2,730,843
1917	1,410	3,108,590	3,110,000	6,216	294,150	2,822,066
1918	774	2,849,195	2,849,969	3,504	232,729	2,620,744
1919	770	2,613,266	2,614,036	1,154	360,787	2,254,403
1920	488	3,306,260	3,306,748	1,685	493,633	2,814,800

* Imports of structural shapes were included with ingots, billets, etc., prior to 1903.

† In these years the production of small structural forms was not included.

PRODUCTION OF WIRE RODS.

PRODUCTION OF WIRE RODS, GROSS TONS, 1889-1920.

Years.	Tons.	Years.	Tons.	Years.	Tons.	Years.	Tons.
1889..	363,851	1897..	970,736	1905..	1,808,688	1913..	2,464,807
1890..	457,099	1898..	1,071,683	1906..	1,871,614	1914..	2,431,714
1891..	536,607	1899..	1,036,398	1907..	2,017,583	1915..	3,095,907
1892..	627,829	1900..	846,291	1908..	1,816,949	1916..	3,518,746
1893..	537,272	1901..	1,365,934	1909..	2,335,685	1917..	3,137,138
1894..	673,402	1902..	1,574,293	1910..	2,241,830	1918..	2,562,390
1895..	791,130	1903..	1,503,455	1911..	2,450,453	1919..	2,538,476
1896..	623,986	1904..	1,699,028	1912..	2,653,553	1920..	3,136,907

Small quantities of copper-clad steel wire rods are included.

**PRODUCTION AND APPROXIMATE CONSUMPTION OF WIRE RODS,
GROSS TONS, 1903-1920.**

Years.	Production of wire rods.			Add imports.	Deduct exports.	Con- sumption.
	Iron.	Steel.	Total.			
1903	30	1,503,425	1,503,455	20,836	22,360	1,501,931
1904	1,166	1,697,862	1,699,028	15,313	20,073	1,694,268
1905	1,281	1,807,407	1,808,688	17,616	6,514	1,819,790
1906	1,201	1,870,413	1,871,614	17,799	5,895	1,883,518
1907	1,550	2,016,033	2,017,583	17,076	10,697	2,023,962
1908	509	1,816,440	1,816,949	11,209	7,412	1,820,746
1909 ....	....	2,335,685	2,335,685	10,544	20,142	2,326,087
1910	627	2,241,203	2,241,830	20,374	22,869	2,239,335
1911	610	2,449,843	2,450,453	15,483	22,641	2,443,295
1912	1,289	2,652,264	2,653,553	15,069	64,978	2,603,644
1913	832	2,463,975	2,464,807	16,098	61,637	2,419,268
1914	731	2,430,983	2,431,714	6,954	61,856	2,376,812
1915	2,236	3,093,671	3,095,907	5,317	165,014	2,936,210
1916	867	3,517,879	3,518,746	4,130	158,284	3,364,592
1917	2,287	3,134,851	3,137,138	1,060	181,941	2,956,257
1918	2,989	2,559,401	2,562,390	7,677	148,523	2,421,544
1919	1,956	2,536,520	2,538,476	342	118,010	2,420,808
1920	4,721	3,132,186	3,136,907	5,488	116,775	3,025,620

Iron or steel wire rods were rolled in 1920 by 42 works in 13 States. In 1919, 40 works in 12 States rolled wire rods.

PRODUCTION OF PLATES AND SHEETS.

**PRODUCTION OF IRON AND STEEL PLATES AND SHEETS,
1891-1920.**

Years.	Gross tons.	Years.	Gross tons.	Years.	Gross tons.
1891	678,927	1901	2,254,425	1911	4,488,049
1892	751,460	1902	2,665,409	1912	5,875,080
1893	674,345	1903	2,599,665	1913	5,751,037
1894	682,900	1904	2,421,398	1914	4,719,246
1895	991,459	1905	3,532,230	1915	6,077,694
1896	965,776	1906	4,182,156	1916	7,453,980
1897	1,207,286	1907	4,248,832	1917	8,267,616
1898	1,448,301	1908	2,649,693	1918	8,799,135
1899	1,903,505	1909	4,234,346	1919	7,372,814
1900	1,794,528	1910	4,955,484	1920	9,337,680

The production of iron and steel nail plate and skelp is not included in the table, but the output of black plates for tinning is included. Tie plates are included for 1909, 1910, and 1911, but not for 1912 and subsequent years. The production of a few plate and sheet plants is estimated.

PRODUCTION OF PLATES AND SHEETS BY GAUGES, GROSS TONS.

Years.	Plates—No. 12 and thicker.			Sheets—No. 13 and thinner.			Grand total.
	Iron.	Steel.	Total.	Iron.	Steel.	Total.	
1905....	10,022	2,031,184	2,041,206	62,134	1,428,890	1,491,024	3,532,230
1906....	23,333	2,508,219	2,531,552	51,040	1,599,564	1,650,604	4,182,156
1907....	30,277	2,629,783	2,660,060	43,761	1,545,011	1,588,772	4,248,832
1908....	31,679	1,239,342	1,271,021	22,354	1,356,318	1,378,672	2,649,693
1909....	32,332	2,346,766	2,379,098	43,870	1,811,378	1,855,248	4,234,346
1910....	37,763	2,769,965	2,807,728	53,355	2,094,401	2,147,756	4,955,484
1911....	46,147	2,288,194	2,334,341	43,280	2,110,428	2,153,708	4,488,049
1912....	33,349	3,001,851	3,035,200	41,695	2,798,185	2,839,880	5,875,080

A new plate and sheet classification was adopted in 1913.

PRODUCTION OF PLATES AND SHEETS BY KINDS, 1913-1920.

Years	Universal plates.*	Sheared plates.		Black sheets rolled on sheet or jobbing mills.	Black plates rolled on tin mills.		Total plates and sheets. Gross tons.
		Rolled on single stands.	Roughed and finished on separate stands.		Black plates for tinning.	Other black plate specialties.	
1913.	1,158,416	1,395,627	448,727	1,716,968	827,266	204,033	5,751,037
1914.	766,113	1,170,338	175,970	1,427,627	938,181	241,017	4,719,246
1915.	954,852	1,626,559	296,640	1,836,786	1,093,345	269,512	6,077,694
1916.	1,224,234	1,982,863	470,287	2,249,597	1,283,802	243,197	7,453,980
1917.	1,195,199	2,396,365	566,674	2,367,752	1,513,772	227,854	8,267,616
1918.	1,234,782	3,125,049	760,077	2,073,639	1,502,690	102,898	8,799,135
1919.	992,054	2,373,696	525,571	2,099,840	1,165,436	216,217	7,372,814
1920	1,249,769	2,843,836	661,528	2,886,401	1,449,330	246,816	9,337,680

PRODUCTION OF PLATES AND SHEETS BY KINDS, 1919-1920.

Kinds.	1919—Gross tons.			1920—Gross tons.		
	Iron.	Steel.	Total.	Iron.	Steel.	Total.
Universal plates*...	2,199	989,855	992,054	3,640	1,246,129	1,249,769
Sheared plates—						
Rolled on single stands.....	503	2,373,193	2,373,696	920	2,842,916	2,843,836
Roughed and fin. on sep. stands..	3,070	522,501	525,571	.....	661,528	661,528
Black sheets rolled on sheet or jobbing mills.....	34,712	2,065,128	2,099,840	27,790	2,858,611	2,886,401
Black plates, including black plates for tinning and black plate specialties rolled on tin mills.	144	1,381,509	1,381,653	1,761	1,694,385	1,696,146
Total.....	40,628	7,332,186	7,372,814	34,111	9,303,569	9,337,680

* Include flats and bars over 6 inches wide.

PRODUCTION OF PLATES AND SHEETS BY SIZE AND MODE OF
MANUFACTURE, GROSS TONS, 1920.

Kinds of products.	Iron.	Steel.	Total.
Universal plates, inc. flats or bars over 6 in. wide:			
$\frac{1}{4}$ of an inch and over in thickness.....	3,640	1,123,405	1,127,045
Under $\frac{1}{4}$ of an inch thick.....		122,724	122,724
Total universal plates.....	3,640	1,246,129	1,249,769
Sheared plates:			
$\frac{1}{4}$ of an inch and over in thickness.....	844	2,903,783	2,904,627
Under $\frac{1}{4}$ of an inch thick.....	70	600,661	600,737
Total sheared plates.....	920	3,504,444	3,505,364
Black sheets, made on either sheet or job. mills:			
No. 12 gauge and thicker.....	959	366,370	367,329
No. 13 gauge and thinner.....	26,831	2,492,241	2,519,072
Total black sheets.....	27,790	2,858,611	2,886,401
Black plates rolled on tin mills:			
Black plates for tinning.....		1,449,330	1,449,330
Other black plate specialties.....	1,761	245,055	246,816
Total black plates rolled on tin mills.....	1,761	1,694,385	1,696,146
Grand total of plates and sheets.....	34,111	9,303,569	9,337,680

PRODUCTION OF SHEARED PLATES ACCORDING TO MODE OF
MANUFACTURE, GROSS TONS, 1920.

Mode of manufacture.	Iron.	Steel.	Total.
Sheared plates, rolled on single stands of rolls:			
$\frac{1}{4}$ of an inch and over in thickness.....	844	2,621,287	2,622,131
Under $\frac{1}{4}$ of an inch thick.....	76	221,629	221,705
Total rolled on single stands.....	920	2,842,916	2,843,836
Sheared plates, roughed and fin. on sep. stands:			
$\frac{1}{4}$ of an inch and over in thickness.....		282,496	282,496
Under $\frac{1}{4}$ of an inch thick.....		379,032	379,032
Total roughed and fin. on sep. stands....		661,528	661,528
Total sheared plates.....	920	3,504,444	3,505,364

PRODUCTION OF UNIVERSAL PLATES BY WIDTHS, SHOWING
IRON AND STEEL SEPARATELY, GROSS TONS, 1920.

Width of universal plates.	Iron.	Steel.	Total.
Under 30 inches wide	3,640	976,498	980,138
30 inches wide, but under 48 inches wide .....	.....	178,186	178,186
48 inches wide and over .....	.....	91,445	91,445
Total	3,640	1,246,129	1,249,769

In a few cases it was necessary for the manufacturers to estimate their output of universal plates by widths.

Of the total output of universal plates in 1920, 78.42 per cent. was under 30 inches wide, 14.26 per cent. was 30 inches but under 48 inches wide, and 7.32 per cent. was 48 inches wide and over.

PRODUCTION OF IRON AND STEEL BLACK PLATES FOR TINNING,
1897-1920.

Years.	Gross tons.	Years.	Gross tons.	Years.	Gross tons.
1897.....	271,886	1905.....	507,587	1913.....	827,266
1898.....	345,254	1906.....	576,079	1914.....	938,181
1899.....	375,000	1907.....	504,072	1915.....	1,093,345
1900.....	315,000	1908.....	513,771	1916.....	1,283,802
1901.....	398,026	1909.....	606,482	1917.....	1,513,772
1902.....	365,743	1910.....	712,137	1918.....	1,502,690
1903.....	490,652	1911.....	795,598	1919.....	1,165,436
1904.....	472,569	1912.....	982,197	1920.....	*1,449,330

* Does not include 18,059 tons of black sheets, rolled on sheet mills, used in the manufacture of terne plates.

PRODUCTION OF BLACK PLATES FOR TINNING, SHOWING IRON
AND STEEL SEPARATELY, GROSS TONS, 1904-1920.

Years.	Iron.	Steel.	Total.	Years.	Iron.	Steel.	Total.
1904...	2,981	469,588	472,569	1913...	2,779	824,487	827,266
1905...	3,152	504,435	507,587	1914...	2,272	935,909	938,181
1906...	5,666	570,413	576,079	1915...	2,038	1,091,307	1,093,345
1907...	3,161	500,911	504,072	1916...	1,878	1,281,924	1,283,802
1908...	2,954	510,817	513,771	1917...	655	1,513,117	1,513,772
1909...	4,261	602,221	606,482	1918...	.....	1,502,690	1,502,690
1910...	2,893	709,244	712,137	1919...	144	1,165,292	1,165,436
1911...	3,515	792,083	795,598	1920...	.....	1,449,330	*1,449,330
1912...	5,378	976,819	982,197	.....	.....	.....	.....

*Does not include 18,059 tons of steel black sheets, rolled on sheet mills, used in the manufacture of terne plates.

Similar statistics for earlier years are not available. In 1920 35 works made black plates for tinning, against 37 in 1919.

APPROXIMATE CONSUMPTION OF PLATES AND SHEETS,
GROSS TONS, 1903-1920.

Years.	Production of plates and sheets.			Add imports.	Deduct exports.	Approximate consumption.
	Iron.	Steel.	Total.			
1903...	2,599,665		2,599,665	11,557	18,094	2,593,128
1904...	67,713	2,353,685	2,421,398	4,165	55,204	2,370,359
1905...	72,156	3,460,074	3,532,230	2,336	75,097	3,459,469
1906...	74,373	4,107,783	4,182,156	3,231	110,700	4,074,687
1907...	74,038	4,174,794	4,248,832	3,748	122,696	4,129,884
1908...	54,033	2,595,660	2,649,693	2,629	104,993	2,547,329
1909...	76,202	4,158,144	4,234,346	4,720	180,047	4,059,019
1910...	91,118	4,864,366	4,955,484	6,152	274,521	4,687,115
1911...	89,427	4,398,622	4,488,049	2,453	372,373	4,118,129
1912...	75,044	5,800,036	5,875,080	3,299	546,521	5,331,858
1913...	64,729	5,686,308	5,751,037	2,893	463,426	5,290,504
1914...	56,590	4,662,656	4,719,246	4,310	280,095	4,443,461
1915...	20,253	6,057,441	6,077,694	1,420	419,604	5,659,510
1916...	13,303	7,440,677	7,453,980	1,730	515,558	6,940,152
1917...	29,071	8,238,545	8,267,616	1,748	851,529	7,417,835
1918...	14,657	8,784,478	8,799,135	1,517	854,136	7,946,516
1919...	40,628	7,332,186	7,372,814	1,095	1,042,697	6,331,212
1920...	34,111	9,303,569	9,337,680	1,792	1,273,558	8,065,914

ACTIVE PLATE AND SHEET WORKS, 1920.

States.	Total active plants.	Of these the following rolled—				
		Universal plates.	Sheared plates.		Black sheets on sheet or job. mills.	Black plates on tin mills.
			Single stands.	Separate stands.		
Massachusetts ..	2	0	0	1	1	0
New York	6	1	2	1	4	0
New Jersey	1	0	1	0	0	0
Pennsylvania ...	61	14	18	12	23	14
Delaware	2	0	1	0	1	0
Maryland	3	1	1	0	2	2
West Virginia ...	10	0	0	1	4	7
Kentucky	2	0	0	0	2	1
Alabama	2	1	1	1	0	0
Ohio	47	3	6	6	31	13
Indiana	9	4	3	2	3	2
Illinois	2	2	2	0	1	1
Wisconsin	1	0	0	1	0	0
Missouri	1	0	0	0	1	0
Colorado	1	1	0	0	0	0
California	1	1	0	0	0	0
Total	*151	*28	35	25	73	40

* Includes mills which rolled flats or bars over 6 inches wide.

PRODUCTION OF MERCHANT BARS.

PRODUCTION OF MERCHANT BARS, SHOWING IRON AND STEEL
MERCHANT BARS SEPARATELY, GROSS TONS, 1905-1920.

Years.	Iron.	Steel.	Total.	Years.	Iron.	Steel.	Total.
1905.	1,322,439	2,271,162	3,593,601	1913.	1,026,632	2,930,977	3,957,609
1906.	1,481,348	2,510,852	3,992,200	1914.	563,171	1,960,460	2,523,631
1907.	1,440,356	2,530,632	3,970,988	1915.	657,107	3,474,135	4,131,242
1908.	685,233	1,301,405	1,986,638	1916.	993,948	5,236,354	6,230,302
1909.	952,230	2,311,301	3,263,531	1917.	983,926	5,226,031	6,209,957
1910.	1,074,163	2,711,568	3,785,731	1918.	846,898	5,395,851	6,242,749
1911.	835,625	2,211,737	3,047,362	1919.	446,549	3,945,075	4,391,624
1912.	944,790	2,752,324	3,697,114	1920.	663,032	5,467,208	6,130,240

Statistics are not available prior to 1905. Horseshoe bars, bolt and nut rods, spike and chain rods, concrete bars, etc., are not included.

In 1920 there were 186 plants in 27 States and the Canal Zone, Panama, which rolled iron or steel merchant bars, as compared with 170 plants in 27 States in 1919. In 1920 iron merchant bars were rolled by 67 works in 21 States and the Canal Zone and steel merchant bars by 144 works in 23 States and the Canal Zone, while in 1919 iron merchant bars were rolled by 72 works in 25 States and steel merchant bars by 128 works in 23 States.

PRODUCTION OF CONCRETE BARS.

PRODUCTION OF CONCRETE BARS, SHOWING IRON AND STEEL
CONCRETE BARS SEPARATELY, GROSS TONS, 1909-1920.

Years.	Iron.	Steel.	Total.	Years.	Iron.	Steel.	Total.
1909.	.....	159,352	159,352	1915.	.....	353,408	353,408
1910.	4,645	236,464	241,109	1916.	2,683	458,717	461,400
1911.	2,388	256,353	258,741	1917.	1,497	469,687	471,184
1912.	2,500	271,832	274,332	1918.	468	344,152	344,620
1913.	113	319,557	319,670	1919.	2,295	416,726	419,021
1914.	.....	288,471	288,471	1920.	698	571,747	572,445

Statistics are not available prior to 1909.

In 1920 there were 69 plants in 20 States which rolled bars for reinforced concrete work, as compared with 54 plants in 17 States in 1919. In 1920 Indiana rolled 19.50 per cent. of the total output, Pennsylvania 16.23 per cent., California 12.75 per cent. and New York 10.82 per cent.

PRODUCTION OF SKELP.

PRODUCTION OF SKELP, SHOWING IRON AND STEEL SKELP SEPARATELY, GROSS TONS, 1905-1920.

Years	Iron.	Steel.	Total.	Years.	Iron.	Steel.	Total.
1905.	452,797	983,198	1,435,995	1913.	312,746	2,189,218	2,501,964
1906.	391,517	1,137,068	1,528,585	1914.	264,340	1,718,091	1,982,431
1907.	444,536	1,358,091	1,802,627	1915.	262,198	2,037,266	2,299,464
1908.	297,049	853,534	1,150,583	1916.	355,445	2,572,229	2,927,674
1909.	370,151	1,663,230	2,033,381	1917.	336,591	2,337,640	2,674,231
1910.	350,578	1,477,616	1,828,194	1918.	258,500	2,305,511	2,564,011
1911.	322,397	1,658,276	1,980,673	1919.	192,146	2,363,632	2,555,778
1912.	327,012	2,119,804	2,446,816	1920.	252,403	2,967,886	3,220,289

PRODUCTION OF NAIL PLATE.

PRODUCTION OF IRON AND STEEL NAIL PLATE, 1889-1920.

Years.	Gross tons.	Years.	Gross tons.	Years.	Gross tons.	Years.	Gross tons.
1889 ..	259,409	1897 ..	94,054	1905 ..	64,542	1913 ..	37,503
1890 ..	251,828	1898 ..	70,188	1906 ..	54,211	1914 ..	38,573
1891 ..	223,312	1899 ..	85,015	1907 ..	52,027	1915 ..	31,929
1892 ..	201,242	1900 ..	70,245	1908 ..	45,747	1916 ..	30,088
1893 ..	136,113	1901 ..	68,850	1909 ..	63,746	1917 ..	22,864
1894 ..	108,262	1902 ..	72,936	1910 ..	45,294	1918 ..	18,310
1895 ..	95,085	1903 ..	64,102	1911 ..	48,522	1919 ..	12,832
1896 ..	72,137	1904 ..	61,601	1912 ..	45,331	1920 ..	20,577

ROLLING MILLS.

NUMBER OF COMPLETED ROLLING MILLS, 1920.

States.	Active.	Idle.	Total.	States.	Active.	Idle.	Total.
Maine	1	0	1	Ohio	81	0	81
Massachusetts ..	7	0	7	Indiana	18	0	18
Rhode Island ..	3	0	3	Illinois	24	2	26
Connecticut	4	0	4	Michigan	4	0	4
New York	26	2	28	Wisconsin	4	0	4
New Jersey	13	1	14	Minnesota ...	2	0	2
Pennsylvania ...	179	7	186	Iowa	1	0	1
Delaware	3	1	4	Missouri	6	1	7
Maryland	6	0	6	Oklahoma	1	0	1
Virginia	2	0	2	Kansas	0	2	2
West Virginia ..	19	0	19	Colorado	1	0	1
Kentucky	8	0	8	Utah	1	0	1
Tennessee	2	0	2	Washington ..	1	1	2
North Carolina .	1	0	1	California	7	0	7
Georgia	2	0	2	Canal Zone ..	1	0	1
Alabama	10	0	10				
Texas	1	0	1	Total	439	17	456

NEW ROLLING MILLS.

Name of company.	Location of works.	Products.
Black Steel & Wire Co.	Kansas City, Mo. . .	Billets, wire rods, etc.
Cambridge Steel Co.	Cambridge, Ohio. . .	Mer. & concrete bars, etc.
Capital City Iron & Steel Co. .	Harrisburg, Pa. . . .	Merchant bars, etc.
Chemung Valley Steel Co. . . .	Elmira Heights, N.Y. .	Mer. and concrete bars.
Columbia Steel Co.	Pittsburg, Cal.	Mer. and concrete bars.
Detroit Seam. Steel Tubes Co.	Detroit, Mich.	Blanks for seam. tubes.
Eastern Rolling Mill Co.	Colgate, Balt., Md. .	Black sheets.
Falcon Steel Co.	Niles, Ohio.	Black and gal. sheets.
McConway & Torley Co.	Pittsburgh, Pa.	Billets, bars, structural.
Memphis Iron & Steel Co.	Memphis, Tenn. . . .	Merchant bar iron.
Newton Steel Co.	Newton Falls, Ohio. .	Black sheets.
Panama Canal.	Balboa, Canal Zone. .	Merchant bars.
Peerless Drawn Steel Co.	Massillon, Ohio. . . .	Mer. bars, cold dwn. prod.
Pennsylvania Forge Co.	Bridesburg, Phila. . .	Billets, bars, forgings.
Scullin Steel Co.	St. Louis, Mo.	Light rails, mer. bars, etc.
Superior Sheet Steel Co.	Canton, Ohio.	Black and gal. sheets.
U. S. Gov., Watertown Arsenal	Watertown Mass. . . .	Armor plate.
United Steel Co.	Lowell, Washington .	Mer. bars, shapes, etc.
Weirton Steel Co.	Weirton, W. Va. . . .	Billets, tinplate bars, etc.

BUILDING ROLLING MILLS, DECEMBER 31, 1920.

Name of company.	Location of works.	Products.
Ashtabula Steel Co.	Ashtabula, Ohio. . . .	Black and gal. sheets.
Baltimore & Ohio R. R. Co. . .	Cumberland, Md. . . .	Merchant bars.
Chapman Price Steel Co. . . .	Indianapolis, Ind. . . .	Black and gal. sheets.
Danville Iron & Steel Corp'n. .	Danville, Pa.	Merchant bars.
Electric Steel & Forge Co. . . .	Cleveland, Ohio. . . .	Bars, billets, etc.
Follansbee Bros. Co.	Toronto, Ohio.	Sheet bars, black sheets.
General Steel Co.	St. Francis, Wis. . . .	Billets, mer. bars, etc.
Hoosier Rolling Mill Co.	Steelton, Ind.	Bars, rails, shapes.
Indianapolis Steel Products Co.	New Palestine, Ind. . .	Bars, screw stock, etc.
Milwaukee Rolling Mill Co. . .	Milwaukee, Wis.	Black and gal. sheets.
Ne v Process Iron & Steel Co. .	Noblesville, Ind. . . .	"T" rails, merchant iron.
Otis Steel Co.	Cleveland, Ohio. . . .	Black and gal. sheets.
Southern Cal. Iron & Steel Co.	Huntington Pk., Cal. .	Mer. bars, bolt rods, etc.
Wayne Steel Co.	Erie, Pa.	Special steel billets.

ROLLING MILLS ABANDONED OR DISMANTLED IN 1920.

In 1920, 6 plants which were equipped for the manufacture of hot rolled iron or steel were abandoned or dismantled—1 in New Jersey, 1 in Pennsylvania, 2 in Ohio, 1 in Michigan, and 1 in Oklahoma.

TINPLATES, GALVANIZED SHEETS, PIPES AND TUBES, NAILS, RAIL JOINTS, AND CHARCOAL BLOOMS.

PRODUCTION OF TINPLATES AND TERNE PLATES.

PRODUCTION OF TINPLATES AND TERNE PLATES, 1891-1920.

Years.	Tinplates.	Terne plates.	Total pounds.
1891 (second 6 months).....	368,400	1,868,343	2,236,743
1892 (calendar year).....	13,921,296	28,197,896	42,119,192
1893.....	64,536,209	59,070,498	123,606,707
1894.....	102,223,467	64,120,002	166,343,409
1895.....	165,927,907	88,683,488	254,611,395
1896.....	270,151,785	89,058,013	359,209,798
1897 (first 6 months).....	203,028,258	49,545,643	252,573,901
1897 (second 6 months).....	.....	.....	322,205,619
1898 (calendar year).....	.....	.....	732,289,600
1899.....	.....	.....	808,360,000
1900 (cen. year end, May 31).....	707,718,239	141,285,783	*850,004,495
1901 (calendar year).....	.....	.....	894,411,840
1902.....	.....	.....	806,400,000
1903.....	.....	.....	1,075,200,000
1904 (cen. year end, Dec. 31).....	867,526,985	158,857,866	*1,032,940,706
1905 (calendar year).....	.....	.....	1,105,440,000
1906.....	1,100,373,000	193,367,000	1,293,740,000
1907.....	996,650,000	156,447,000	1,153,097,000
1908.....	1,048,896,000	154,179,000	1,203,075,000
1909.....	1,179,858,000	190,930,000	1,370,788,000
1910.....	1,450,821,000	168,184,000	1,619,005,000
1911.....	1,597,629,000	158,441,000	1,756,070,000
1912.....	1,965,659,000	191,396,000	2,157,055,000
1913.....	1,708,186,000	136,944,000	1,845,130,000
1914.....	1,939,785,000	146,195,000	2,085,980,000
1915.....	2,201,825,054	163,470,646	2,365,295,700
1916.....	2,552,224,275	214,176,952	2,766,401,227
1917.....	3,233,314,911	153,891,653	3,387,206,564
1918.....	3,216,247,675	85,376,569	3,301,624,244
1919.....	2,407,156,757	170,854,730	2,578,011,487
1920.....	3,079,953,351	138,224,379	3,218,177,730

* Includes 1,000,473 pounds in 1900 and 6,555,855 pounds in 1904 of "other sheet iron and sheet steel, tin or terne plated."

ACTIVE TINPLATE AND TERNE PLATE WORKS.

In 1920 there were 36 plants in 6 States which made tin or terne plates. Of the total, 33 plants made coke tinplates, 17 plants made charcoal tinplates, and 7 plants made terne plates. The number of active plants in 1919 was 38.

PRODUCTION OF TINPLATES AND TERNE PLATES, 1891-1920.

Calendar years.	Gross tons.	Calendar years.	Gross tons.
1891 (last six months)	999	1906	577,562
1892	18,803	1907	514,775
1893	55,182	1908	537,087
1894	74,260	1909	611,959
1895	113,666	1910	722,770
1896	160,362	1911	783,960
1897	256,598	1912	962,971
1898	326,915	1913	823,719
1899	360,875	1914	1,31,241
1900 (cen. yr. end. May 31)	379,466	1915	1,055,936
1901	399,291	1916	1,235,000
1902	360,000	1917	1,512,146
1903	480,000	1918	1,473,939
1904 (cen. yr. end. Dec. 31)	461,134	1919	1,150,898
1905	493,500	1920	1,436,686

PRODUCTION OF IRON AND STEEL TERNE PLATES AND STEEL TINPLATES, 1908-1920.

Years.	Terne plates—Pounds.			Steel tinplates.	Grand total. Pounds.
	Iron.	Steel.	Total.		
1908	6,560,500	147,618,500	154,179,000	1,048,896,000	1,203,075,000
1909	8,054,900	182,875,100	190,930,000	1,179,858,000	1,370,788,000
1910	5,765,000	162,419,000	168,184,000	1,450,821,000	1,619,005,000
1911	7,720,000	150,721,000	158,441,000	1,597,629,000	1,756,070,000
1912	11,259,000	180,137,000	191,396,000	1,965,659,000	2,157,055,000
1913	6,433,000	130,511,000	136,944,000	1,708,186,000*	1,845,130,000
1914	6,109,000	140,086,000	146,195,000	1,939,785,000	2,085,980,000
1915	4,653,860	158,816,786	163,470,646	2,201,825,054	2,365,295,700
1916	4,199,154	209,977,798	214,176,952	2,552,224,275†	2,766,401,227
1917	1,188,660	152,702,993	153,891,653	3,233,314,911	3,387,206,564
1918	85,376,569	85,376,569	85,376,569	3,216,247,675	3,301,624,244
1919	322,330	170,532,400	170,854,730	2,407,156,757	2,578,011,487
1920	138,224,379	138,224,379	138,224,379	3,079,953,351	3,218,177,730

* Includes about 1,000 pounds iron tinplates.

† Includes 208,000 pounds of iron tinplates.

PRODUCTION OF COKE AND CHARCOAL TINPLATES, 1920.

States.	Coke. Pounds.	Charcoal. Pounds.	Total. Pounds.
Pennsylvania	1,505,550,876	24,989,398	1,530,540,274
Maryland, West Virginia. . . .	494,141,873	26,010,896	520,152,769
Ohio, Indiana, Illinois.	1,018,906,531	10,353,777	1,029,260,308
Total	3,018,599,280	61,354,071	3,079,953,351

* Includes a little less than 6,000,000 pounds which were formed or stamped from black plates by a company which manufactures tinplates and tinned after the completion of the forming or stamping process.

APPROXIMATE CONSUMPTION OF TINPLATES AND TERNE PLATES,
GROSS TONS, 1904-1920.

Calendar years.	Production.	Add imports.	Deduct exports.	Approximate consumption.
1904 (census year)	*461,134	70,652	7,898	523,888
1905.	493,500	65,740	7,941	551,299
1906.	577,562	56,983	12,082	622,463
1907.	514,775	57,773	10,203	562,345
1908.	537,087	58,490	11,878	583,699
1909.	611,959	62,593	9,327	665,225
1910.	722,770	66,640	12,445	776,965
1911.	783,960	14,099	61,381	736,678
1912.	962,971	2,052	81,694	883,329
1913.	823,719	20,680	57,812	786,587
1914.	931,241	15,411	59,549	887,103
1915.	1,055,936	2,350	154,642	903,644
1916.	1,235,000	1,008	227,391	1,008,617
1917.	1,512,146	124	232,799	1,279,471
1918.	1,473,939	32	258,538	1,215,433
1919.	1,150,898	242	204,521	946,619
1920.	1,436,686	400	226,410	1,210,676

* Census year ended December 31, 1904.

PRODUCTION OF GALVANIZED SHEETS.

PRODUCTION OF IRON AND STEEL GALVANIZED SHEETS AND
GALVANIZED FORMED PRODUCTS, 1913-1920.

Years.	Galvanized sheets.	Galvanized formed products.*	Total. Pounds.
1913.	1,845,864,365	129,189,480	1,975,053,845
1914.	1,807,667,129	131,603,609	1,939,270,738
1915.	1,581,569,206	112,192,790	1,693,761,996
1916.	1,346,924,950	130,302,195	1,477,227,145
1917.	1,273,978,805	114,902,171	1,388,880,976
1918.	1,159,778,807	121,110,267	1,280,889,074
1919.	1,500,575,548	140,494,884	1,641,070,432
1920.	1,871,360,951	143,894,730	2,015,255,681

* Articles formed or stamped from iron or steel black plates or black sheets and galvanized after the completion of the forming or stamping process.

PRODUCTION OF HAMMERED CHARCOAL IRON
BLOOMS, BILLETS, ETC.

Years.	For sale.	For own use.	Total. Gross tons.	Years.	For sale.	For own use.	Total. Gross tons.
1911. . .	2,271	70,345	72,616	1916. .	5,405	95,280	100,685
1912. . .	250	75,557	75,807	1917. .	7,841	103,284	111,125
1913. . .	80	71,313	71,393	1918. .	8,300	74,787	83,087
1914. . .	5,026	46,399	51,425	1919. .	1,027	31,210	32,237
1915. . .	902	57,219	58,121	1920. .	2,731	59,893	62,624

PRODUCTION OF PIPES AND TUBES.

PRODUCTION OF WROUGHT PIPE AND BOILER TUBES, 1913-1920.

Years.	Black, standard.	Galvanized.	Oil country goods.	O. D. and miscellaneous.	Boiler tubes.	Total. Gross tons.
1913.	830,472	266,940	841,089	179,211	127,820	2,245,532
1914.	664,507	265,029	619,291	111,385	77,492	1,737,704
1915.	823,767	280,944	602,920	115,113	96,930	1,919,674
1916.	1,132,643	291,013	940,491	138,763	148,148	2,651,058
1917.	1,059,747	275,305	887,903	115,690	148,332	2,486,977
1918.	1,015,785	264,682	794,769	91,157	124,086	2,290,479
1919.	827,082	268,156	1,068,914	120,670	90,109	2,374,931
1920.	1,168,768	317,319	1,261,778	135,924	118,936	3,002,725

PRODUCTION OF WROUGHT PIPE AND BOILER TUBES, SHOWING IRON AND STEEL SEPARATELY, 1919-1920.

Kinds of pipe.	1919—Gross tons.			1920—Gross tons.		
	Iron.	Steel.	Total.	Iron.	Steel.	Total.
Black, standard.	51,682	775,400	827,082	75,066	1,093,702	1,168,768
Galvanized	14,661	253,495	268,156	19,560	297,759	317,319
Oil country goods	73,522	995,392	1,068,914	71,610	1,190,168	1,261,778
O. D. and. misc.		120,670	120,670		135,924	135,924
Boiler tubes	22,491	67,618	90,109	33,437	85,499	118,936
Total.	162,356	2,212,575	2,374,931	199,673	2,803,052	3,002,725

PRODUCTION OF SEAMLESS STEEL TUBES, GROSS TONS, 1913-1920.

Years.	Hot finished.	Cold drawn.	Total.	Years.	Hot finished.	Cold drawn.	Total.
1913.	42,740	65,827	108,567	1917.	87,615	139,060	226,675
1914.	36,939	53,656	90,595	1918.	142,308	150,586	292,894
1915.	63,488	76,180	139,668	1919.	75,864	121,505	197,369
1916.	61,235	129,238	190,473	1920.	132,091	159,479	291,570

PRODUCTION OF CAST-IRON PIPE AND FITTINGS, NET TONS.

Years.	Gas and water.*	Soil and plumbers.	Total.	Years.	Gas and water.*	Soil and plumbers.	Total.
1913.	1,010,016	256,229	1,266,245	1917. . .	748,173	250,928	999,101
1914.	938,297	222,483	1,160,780	1918. . .	508,300	111,373	619,673
1915.	956,372	258,498	1,214,870	1919. . .	514,664	195,417	710,081
1916.	934,626	279,707	1,214,333	1920. . .	636,862	249,653	886,515

* Includes culvert pipe.

PRODUCTION OF CAST-IRON PIPE, NET TONS, 1919-1920.

Kinds of pipe.	1919—Net tons.			1920—Net tons.		
	Pipe.	Fittings.	Total.	Pipe.	Fittings.	Total.
Gas and water*	469,735	44,929	514,664	591,692	45,170	636,862
Soil and plumbers'	142,989	52,428	195,417	183,831	65,822	249,653
Total.	612,724	97,357	710,081	775,523	110,992	886,515

* Includes culvert pipe. Manufacturers able to separate their production report 8,500 tons of culvert pipe in 1920 and 12,577 tons in 1919.

PRODUCTION OF CUT AND WIRE NAILS.

PRODUCTION OF WIRE NAILS IN 100-LB. KEGS, 1890-1920.

Years.	Production.	Exports.	Consumption.	Years.	Production.	Exports.	Consumption.
1890..	3,135,911	18,395	3,117,516	1906	11,486,647	1,035,705	10,450,942
1891..	4,114,385	18,986	4,095,399	1907	11,731,044	945,035	10,786,009
1892..	4,719,524	21,387	4,698,137	1908	10,662,972	593,819	10,069,153
1893..	5,095,945	27,451	5,068,494	1909	13,916,053	686,687	13,229,366
1894..	5,681,801	38,920	5,642,881	1910	12,704,902	960,295	11,744,607
1895..	5,841,403	53,012	5,788,391	1911	13,437,778	1,200,957	12,236,821
1896..	4,719,860	95,638	4,624,222	1912	14,659,700	1,530,353	13,129,347
1897..	8,997,245	129,767	8,867,478	1913	13,559,727	977,477	12,582,250
1898..	7,418,475	307,190	7,111,285	1914	13,132,814	809,167	12,323,647
1899..	7,618,130	750,781	6,867,349	1915	14,583,026	2,051,475	12,531,551
1900..	7,233,979	613,858	6,620,121	1916	17,147,665	3,363,876	13,783,789
1901..	9,803,822	420,506	9,383,316	1917	17,040,666	2,574,054	14,466,612
1902..	10,982,246	595,391	10,386,855	1918	12,279,800	1,763,460	10,516,340
1903..	9,631,661	704,546	8,927,115	1919	13,094,221	2,011,045	11,083,176
1904..	11,926,661	734,554	11,192,107	1920	16,449,506	2,087,195	14,362,311
1905..	10,854,892	799,734	10,055,158	.....	.....	.....	.....

In 1920 wire nails were made by 58 works in 14 States, while in 1919 wire nails were made by 54 works in 14 States.

PRODUCTION OF CUT NAILS IN 100-LB. KEGS, 1890-1920.

Years.	Production.	Exports.	Consumption.	Years.	Production.	Exports.	Consumption.
1890..	5,640,946	134,374	5,506,572	1906	1,189,239	169,519	1,019,720
1891..	5,002,176	103,836	4,898,340	1907	1,109,138	155,212	953,926
1892..	4,507,819	152,686	4,355,133	1908	956,182	157,319	798,863
1893..	3,048,933	131,910	2,917,023	1909	1,207,597	222,565	985,032
1894..	2,425,060	183,229	2,241,831	1910	1,005,233	182,087	823,146
1895..	2,129,894	176,394	1,953,500	1911	967,636	255,854	711,782
1896..	1,615,870	237,088	1,378,782	1912	978,415	208,568	769,847
1897..	2,106,799	337,732	1,769,067	1913	842,038	84,885	757,153
1898..	1,572,221	352,473	1,219,748	1914	769,665	76,676	692,989
1899..	1,904,340	223,425	1,680,915	1915	775,327	94,878	680,449
1900..	1,573,494	250,053	1,323,441	1916	764,835	106,451	658,384
1901..	1,542,240	208,359	1,333,881	1917	461,674	101,362	360,312
1902..	1,633,762	161,228	1,472,534	1918	418,811	85,668	333,143
1903..	1,435,893	199,126	1,236,767	1919	394,477	65,423	329,054
1904..	1,283,362	207,720	1,075,642	1920	844,583	86,427	758,156
1905..	1,357,549	176,741	1,180,808	.....	.....	.....	.....

Horseshoe nails, cut tacks, or railroad or other forged iron or steel spikes are not included.

Twenty-one works in 9 States made cut nails in 1920, against 13 works in 7 States in 1919.

PRODUCTION OF RAIL JOINTS AND FASTENINGS
BY ROLLING MILLS AND STEEL WORKS.

PRODUCTION OF IRON AND STEEL RAIL JOINTS AND FASTENINGS,
GROSS TONS, 1912-1920.

Years.	Angle splice bars.	Tie plates.	Fish plates.	Other rail joints.	Total.
1912.....	183,279	261,541	19,146	63,805	527,771
1913.....	153,450	324,428	16,559	133,041	627,478
1914.....	86,775	205,385	11,664	58,902	362,726
1915.....	119,658	283,509	10,836	56,721	470,724
1916.....	162,702	324,718	22,902	91,787	602,109
1917.....	181,957	249,125	21,304	77,017	529,403
1918.....	137,664	161,881	10,787	51,292	361,624
1919.....	111,169	205,210	11,850	49,854	378,083
1920.....	175,278	263,635	16,603	71,236	526,752

Prior to 1912 statistics are not available.

PRODUCTION OF RAIL JOINTS AND FASTENINGS, SHOWING IRON
AND STEEL SEPARATELY, 1919-1920.

Articles.	1919—Gross tons.			1920—Gross tons.		
	Iron.	Steel.	Total.	Iron.	Steel.	Total.
Angle splice bars.....	1,944	109,225	111,169	2,347	172,931	175,278
Tie plates.....	51,314	153,896	205,210	47,512	216,123	263,635
Fish plates.....	427	11,423	11,850	676	15,927	16,603
Other rail joints.....	192	49,662	49,854	.....	71,236	71,236
Total.....	53,877	324,206	378,083	50,535	476,217	526,752

It was necessary to estimate the output of one plant in 1919 and 1920. The output of spikes, bolts, nuts, and similar fastenings is not included. There were 25 active works in 1920 and 1919.

PRODUCTION OF FORGED IRON AND STEEL BY
ROLLING MILLS AND STEEL WORKS.

Years.	Production—Gross tons.			Years.	Production—Gross tons.		
	Iron.	Steel.	Total.		Iron.	Steel.	Total.
1911..	4,034	214,202	218,236	1916..	3,352	920,415	923,767
1912..	9,155	383,365	392,520	1917..	8,772	1,069,993	1,078,765
1913..	27,892	380,091	407,983	1918..	24,458	1,271,108	1,295,566
1914..	3,675	337,746	341,421	1919..	23,822	510,524	534,346
1915..	2,814	520,909	523,723	1920..	38,063	502,041	540,104

PRODUCTION AND SHIPMENTS OF IRON ORE, COAL, AND COKE.

PRODUCTION AND SHIPMENTS OF IRON ORE.

PRODUCTION OF IRON ORE BY STATES, GROSS TONS, 1916-1920.

[From Mineral Resources of the United States, U. S. Geological Survey.]

States.	1916.	1917.	1918.	1919.	1920.
Minnesota.....	44,585,422	44,595,232	41,953,969	36,000,626	39,453,173
Michigan.....	18,071,016	17,868,601	16,899,341	15,438,930	17,510,742
Alabama.....	6,747,901	7,037,707	5,754,624	5,053,035	5,894,011
New York.....	1,342,507	1,304,317	906,179	871,495	920,009
Wisconsin.....	1,304,518	1,202,235	1,089,351	1,087,247	981,134
Pennsylvania.....	559,431	546,700	522,600	627,167	734,383
Virginia.....	440,492	469,903	414,048	305,096	320,924
Tennessee.....	455,834	508,529	408,954	283,792	375,538
New Jersey.....	493,004	489,943	423,525	404,428	431,567
Georgia.....	256,949	226,630	264,602	71,224	104,511
West Va., Md., N. C..	72,366	107,459	116,413	59,135	72,914
Missouri.....	34,914	38,908	72,708	53,856	54,994
Ohio.....	1,800				
Other States.....	801,518	892,687	831,964	709,387	750,565
Total.....	75,167,672	75,288,851	69,658,278	60,965,418	67,604,465

IRON ORE MARKETED (SHIPPED) BY STATES, 1919-1920.

[From Mineral Resources of the United States, U. S. Geological Survey.]

States.	1919—Gross tons.		1920—Gross tons.	
	Marketed.	Value.	Marketed.	Value.
Minnesota.....	34,547,356	\$121,107,247	39,747,594	\$163,538,054
Michigan.....	12,911,727	49,774,212	18,862,578	85,749,217
Alabama.....	4,895,309	11,954,425	5,833,317	15,993,985
New York.....	701,688	4,062,312	959,408	6,263,252
Wisconsin.....	881,740	3,253,290	1,067,159	4,333,307
Pennsylvania.....	616,271	1,340,219	719,813	1,406,929
Virginia.....	304,920	1,139,349	320,109	1,227,601
Tennessee.....	282,988	817,549	373,012	1,355,217
New Jersey.....	336,629	1,712,255	417,100	2,595,949
Georgia.....	74,007	294,619	104,482	460,633
Other States.....	820,149	1,917,040	876,769	2,082,183
Total.....	56,372,784	\$197,312,517	69,281,341	\$285,006,327

SHIPMENTS OF LAKE SUPERIOR IRON ORE.

IRON ORE SHIPMENTS BY RANGES, GROSS TONS, 1916-1920.

[From statistics gathered by The Iron Trade Review.]

Ranges.	1916.	1917.	1918.	1919.	1920.
Marquette	5,396,007	4,874,150	4,354,297	2,992,212	4,608,323
Menominee	6,364,363	6,045,750	6,378,698	4,442,868	6,562,106
Gogebic.	8,489,685	7,981,684	7,936,701	6,230,839	8,763,332
Vermilion	1,947,200	1,530,692	1,192,908	929,049	1,007,435
Mesabi	42,525,612	41,445,211	40,396,711	31,997,699	37,149,277
Cuyuna	1,716,218	2,422,884	2,478,800	*1,861,165	2,191,528
Miscellaneous. . .	219,381	136,632	98,057	*92,819	129,571
Total.	66,658,466	64,437,003	62,836,172	*48,546,651	60,411,572

* Revised.

IRON ORE SHIPMENTS BY PORTS, GROSS TONS, 1916-1920.

[From statistics gathered by The Iron Trade Review.]

Ports.	1916.	1917.	1918.	1919.	1920.
Escanaba	7,457,444	7,156,854	6,774,969	4,963,358	7,361,070
Marquette	3,858,092	3,207,145	3,457,054	2,132,935	3,415,108
Ashland	8,057,814	7,597,841	7,565,608	5,915,383	8,180,852
Two Harbors. . . .	10,735,853	9,990,901	8,723,472	6,424,545	9,278,464
Superior	12,787,046	13,978,741	14,068,341	10,919,965	14,812,398
Duluth.	21,837,949	20,567,419	20,567,288	16,821,209	15,479,334
Total lake. . . .	64,734,198	62,498,901	61,156,732	47,177,395	58,527,226
All rail.	1,924,268	1,938,102	1,679,440	*1,369,256	1,884,346
Grand total. . . .	66,658,466	64,437,003	62,836,172	*48,546,651	60,411,572

* Revised.

IRON ORE RECEIVED AND ON DOCK AT CLOSE OF NAVIGATION
AT LAKE ERIE PORTS, 1889-1920.

[From statistics gathered by The Iron Trade Review.]

Years.	Receipts. Gross tons.	On dock. Gross tons.	Years.	Receipts. Gross tons.	On dock. Gross tons.
1889	5,856,344	2,607,106	1905	29,060,693	6,438,967
1890	6,874,664	3,893,487	1906	32,194,205	6,252,455
1891	4,939,684	3,508,489	1907	35,348,915	7,385,728
1892	6,660,734	4,149,451	1908	20,527,052	9,074,003
1893	5,333,061	4,070,710	1909	33,672,825	9,471,428
1894	6,350,825	4,834,247	1910	34,042,897	9,797,980
1895	8,112,228	4,415,712	1911	25,531,550	9,469,869
1896	8,026,432	4,954,984	1912	37,472,108	10,080,798
1897	10,120,906	5,923,755	1913	39,099,647	9,261,676
1898	11,028,321	5,136,407	1914	25,402,655	8,407,905
1899	15,222,187	5,530,283	1915	37,967,460	8,910,351
1900	15,797,787	5,904,670	1916	51,807,272	10,167,760
1901	17,014,076	5,859,663	1917	48,812,859	10,326,349
1902	22,649,424	7,074,254	1918	48,183,015	10,424,967
1903	19,681,731	6,371,085	1919	37,423,585	10,456,314
1904	17,932,814	5,763,399	1920	45,669,994	10,930,854

RECEIPTS OF LAKE SUPERIOR IRON ORE AT LAKE ERIE PORTS,
GROSS TONS, 1916-1920.

[From statistics gathered by The Iron Trade Review.]

Ports.	1916.	1917.	1918.	1919.	1920.
Toledo.	2,035,160	2,445,602	2,608,497	1,536,437	2,654,957
Huron.	1,324,112	1,631,395	1,620,712	1,134,104	1,421,509
Lorain.	4,613,929	3,831,244	3,494,370	3,379,421	4,045,286
Cleveland.	10,669,745	9,077,161	9,681,882	7,466,921	7,865,757
Fairport.	2,580,647	2,311,179	1,853,465	1,952,635	1,247,964
Ashtabula.	11,474,268	10,251,304	11,001,574	8,377,277	11,028,518
Conneaut.	9,588,341	8,729,754	6,650,898	7,056,882	5,989,763
Erie.	1,525,031	2,079,227	1,809,619	1,102,478	2,218,706
Buffalo.	7,432,220	7,843,215	8,845,775	4,649,008	8,196,981
Detroit.	425,579	418,151	444,936	549,096	813,381
Port Colborne. .	138,240	194,627	171,287	219,326	187,172
Total.	51,807,272	48,812,859	48,183,015	37,423,585	45,669,994

Shipments from the Magpie and Moose Mountain mines, in Ontario, not included above, were 114,189 tons in 1920.

Shipments of iron ore from the Lake Superior region for the account of the United States Steel Corporation from mines owned wholly or in part by the Corporation amounted in 1920 to 25,269,730 gross tons, or 41.8 per cent. of the total shipments from that region, as compared with 22,426,217 tons, or 46.2 per cent., in 1919; 26,177,243 tons, or 41.7 per cent., in 1918; 28,737,582 tons, or 44.6 per cent., in 1917; and 31,664,883 tons, or 47.5 per cent., in 1916.

LARGEST SHIPPERS OF LAKE SUPERIOR IRON ORE IN 1920.

Mesabi Range:—Hull-Rust, 6,994,728 gross tons; Mesabi Mountain, 2,354,022 tons; Mahoning, 1,720,538 tons; Hartley-Burt-Palmer, 1,249,736 tons; Canisteo, 1,127,735 tons; Fayal, 1,045,664 tons; Morris, 948,226 tons; Adams, 784,481 tons; Dunwoody, 774,276 tons; Spruce, 732,417 tons; Kerr, 680,873 tons; Grant, 606,383 tons; Burt-Pool-Day, 602,726 tons; Hill Annex, 599,441 tons; Bennett, 598,241 tons; Arcturus, 584,082 tons; Hawkins, 571,117 tons; Holman, 570,551 tons; Leonidas, 555,337 tons; Susquehanna, 545,746 tons; Biwabik, 452,472 tons; Patrick, 423,122 tons. These 22 mines shipped 24,521,914 tons in 1920, or 66 per cent. of the total shipments from this range. No other mine shipped more than 422,000 tons; 114 mines were active shippers.

Gogebic Range:—Norrie group, 1,610,128 tons; Newport, 1,155,149 tons; Wakefield, 978,694 tons; Palms, 727,224 tons;

Plymouth, 712,806 tons; Iron-ton, 406,799 tons; Yale (West Colby), 337,033 tons; Keweenaw, 322,827 tons; Montreal, 306,660 tons; Ottawa (Odanah), 290,304 tons. No other mine shipped more than 266,000 tons; 25 mines were active shippers.

Menominee Range:—Chapin, 850,316 tons; Penn Iron Mining Co., 524,111 tons; Aragon, 445,102 tons; Caspian, 421,822 tons; Bristol (Claire), 368,479 tons; Homer, 300,111 tons; Bengal, 265,035 tons; Odgers, 222,336 tons. No other mine shipped more than 221,000 tons; 39 mines were active shippers.

Marquette Range:—Cleveland-Cliffs group, 651,004 tons; Negaunee, 550,297 tons; Maas, 379,132 tons; Lake Superior, 298,720 tons; Rolling Mill, 274,012 tons; Mary Charlotte, 253,022 tons; Cambria, 201,422 tons; Morris-Lloyd, 200,388 tons; Gwynn, 196,932 tons; Holmes, 195,973 tons; Athens, 188,336 tons. No other mine shipped more than 188,000 tons; 27 mines were active shippers.

Vermilion Range:—Pioneer, 441,017 tons; Zenith, 200,077 tons; Soudan, 142,147 tons; Chandler, 133,481 tons; Sibley, 52,576 tons; Section 30, 37,547 tons; Consolidated Vermilion, 590 tons; 7 mines were active.

Cuyuna Range:—Armour No. 2, 286,186 tons; Kennedy, 226,388 tons; Hill Crest, 190,679 tons; Meacham, 190,269 tons; Portsmouth, 186,259 tons; Sagamore, 163,905 tons; Croft, 154,766 tons; Pennington, 144,403 tons; Mahnomen, 137,127 tons; Rowe, 112,094 tons. No other mine shipped more than 80,000 tons; 24 mines were active.

PRODUCTION, IMPORTS, AND CONSUMPTION OF MANGANESE ORE,
GROSS TONS, 1893-1920.

Years.	Production.	Imports.	Approximate consumption.	Years.	Production.	Imports.	Approximate consumption.
1893..	7,718	68,113	75,831	1907	5,604	209,021	214,625
1894..	6,308	44,655	50,963	1908	6,144	178,203	184,347
1895..	9,547	86,111	95,658	1909	1,544	212,765	214,309
1896..	10,088	31,489	41,577	1910	*2,258	242,348	244,606
1897..	11,108	119,961	131,069	1911	2,457	176,852	179,309
1898..	15,957	114,885	130,842	1912	1,664	300,661	302,325
1899..	9,935	188,349	198,284	1913	4,048	345,090	349,138
1900..	11,771	256,252	268,023	1914	2,635	283,294	285,929
1901..	11,995	165,722	177,717	1915	9,613	313,985	323,598
1902..	7,477	235,576	243,053	1916	31,474	576,321	607,795
1903..	2,825	146,056	148,881	1917	129,405	629,972	759,377
1904..	3,146	108,519	111,665	1918	305,869	491,303	797,172
1905..	4,118	257,033	261,151	1919	55,322	333,344	388,666
1906..	6,921	221,260	228,181	1920	94,420	606,937	701,357

* From 1910 to date, marketed production.

PRODUCTION AND SHIPMENTS OF COAL.

PRODUCTION OF COAL BY STATES, NET TONS, 1916-1920.

[From Mineral Resources of the United States, U. S. Geological Survey.]

States.	1916.	1917.	1918.	1919.	1920.*
Alabama.....	18,086,197	20,068,074	19,184,962	15,536,721	16,700,000
Arkansas.....	1,994,915	2,143,579	2,227,369	1,429,020	2,310,000
Colorado.....	10,484,237	12,483,336	12,407,571	10,323,420	12,100,000
Illinois.....	66,195,336	86,199,387	89,291,105	60,862,608	90,050,000
Indiana.....	20,093,528	26,539,329	30,678,634	20,912,288	30,420,000
Iowa.....	7,260,800	8,965,830	8,192,195	5,624,692	9,170,000
Kansas.....	6,881,455	7,184,975	7,561,947	5,224,724	6,700,000
Kentucky.....	25,393,997	27,807,971	31,612,617	30,036,061	31,000,000
Maryland.....	4,460,046	4,745,924	4,497,297	3,021,686	4,050,000
Michigan.....	1,180,360	1,374,805	1,464,818	996,545	1,440,000
Missouri.....	4,742,146	5,670,549	5,667,730	3,979,798	5,750,000
Montana.....	3,632,527	4,226,689	4,532,505	3,236,369	4,440,000
New Mexico..	3,793,011	4,000,527	4,023,239	3,138,756	3,750,000
North Dakota.	634,912	790,548	719,733	840,959	770,000
Ohio.....	34,728,219	40,748,734	45,812,943	35,876,682	45,000,000
Oklahoma....	3,608,011	4,386,844	4,813,447	3,802,113	4,200,000
Penna. bitum..	170,295,424	172,448,142	178,550,741	150,758,154	163,000,000
Tennessee....	6,137,449	6,194,221	6,831,048	5,213,205	6,750,000
Texas.....	1,987,503	2,355,815	2,261,135	1,680,656	1,800,000
Utah.....	3,567,428	4,125,230	5,136,825	4,631,323	5,870,000
Virginia.....	9,707,474	10,087,091	10,289,808	9,326,830	9,850,000
Washington...	3,038,588	4,009,902	4,082,212	2,990,447	3,750,000
West Virginia.	86,460,127	86,441,667	89,935,839	79,036,553	87,500,000
Wyoming.....	7,910,647	8,575,619	9,438,688	7,219,738	10,000,000
Other States..	245,345	215,775	171,412	160,710	193,000
Total bitum..	502,519,682	551,790,563	579,385,820	465,860,058	556,563,000
Penna. anth.	87,578,493	99,611,811	98,826,084	88,092,201	89,100,000
Grand total	590,098,175	651,402,374	678,211,904	553,952,259	645,663,000

* Estimated by the United States Geological Survey.

Changing net to gross tons the estimated output in 1920 amounted to 576,484,821 tons, of which 496,931,250 gross tons were bituminous and 79,553,571 gross tons were Pennsylvania anthracite.

As compared with 1919 there was an estimated increase in output in 1920 of 91,710,741 net tons, or 81,884,590 gross tons.

PRODUCTION AND SHIPMENTS OF COKE.

PRODUCTION OF COKE BY STATES, NET TONS, 1916-1920.

[From Mineral Resources of the United States, U. S. Geological Survey.]

States.	1916.	1917.	1918.	1919.†	1920.†
Pennsylvania..	31,279,695	27,912,025	26,723,645	20,629,330	23,400,000
Alabama.....	4,298,417	4,892,589	4,352,172	3,829,619	4,662,000
Indiana.....	3,489,660	3,540,718	3,898,215	3,702,180	4,567,000
West Virginia..	2,521,309	3,349,761	3,320,006	1,452,306	1,792,000
Illinois.....	2,320,400	2,289,833	2,285,610	1,703,903	2,086,000
Virginia.....	1,242,332	1,304,230	1,234,256	880,614	916,000
Colorado.....	1,053,553	1,112,449	989,447	698,987	859,000
New York.....	775,014	993,184	1,069,587	751,067	1,041,000
New Mexico...	502,812	577,679	597,072	276,275	237,000
Tennessee.....	382,175	411,326	427,106	180,939	257,000
Ohio.....	1,803,268	3,694,302	5,365,243	5,460,004	5,786,000
Kentucky.....	802,526	863,071	818,785	727,349	795,000
New Jersey...*	.....	423,361	682,148	788,465	722,000
Washington...†	534,653	497,533	123,788	56,203	54,000
Georgia.....	47,127	39,589	22,048	18,016	17,000
Other States...	3,480,644	3,705,178	4,569,244	3,638,285	4,697,000
Total..Net tons	54,533,585	55,606,828	56,478,372	44,793,542	51,888,000

*Production included with "other States."

† Includes Utah.

‡ Estimated by the United States Geological Survey.

PRODUCTION OF BY-PRODUCT COKE, NET TONS, 1901-1920.

[Compiled from Mineral Resources of the United States, U. S. Geological Survey.]

Years.	Total production of coke.	Production in by-product ovens.	Per cent. by-product of total.	Annual inc. in output of by-product coke.
1901.....	21,795,883	1,179,900	5.41	.....
1902.....	25,401,730	1,403,588	5.53	223,688
1903.....	25,274,281	1,882,394	7.45	478,806
1904.....	23,661,106	2,608,229	11.02	725,835
1905.....	32,231,129	3,462,348	10.74	854,119
1906.....	36,401,217	4,558,127	12.52	1,095,779
1907.....	40,779,564	5,607,899	13.75	1,049,772
1908.....	26,033,518	4,201,226	16.14	* 1,406,673
1909.....	39,315,065	6,254,644	15.91	2,053,418
1910.....	41,708,810	7,138,734	17.12	884,090
1911.....	35,551,489	7,847,845	22.07	709,111
1912.....	43,983,599	11,115,164	25.27	3,267,319
1913.....	46,299,530	12,714,700	27.46	1,599,536
1914.....	34,555,914	11,219,943	32.47	* 1,494,757
1915.....	41,581,150	14,072,895	33.84	2,852,952
1916.....	54,533,585	19,069,361	34.97	4,996,466
1917.....	55,606,828	22,439,280	40.35	3,369,919
1918.....	56,478,372	25,997,580	46.03	3,558,300
1919.....	†44,793,542	‡25,143,542	56.13	* 854,038
1920.....	†51,888,000	†30,908,000	59.57	5,764,458

* Decrease.

† Estimated by the United States Geological Survey.

‡ By-product figures final, beehive estimated.

NUMBER OF OVENS, SHIPMENTS, AND AVERAGE PRICES OF CONNELLVILLE COKE, 1880-1920.

[From statistics gathered by The Connellsville Courier.]

Calendar years.	Total ovens.	Shipments. Net tons.	Average price.	Calendar years.	Total ovens.	Shipments. Net tons.	Average price.
1880.	7,211	2,205,946	\$1.79	1901. ...	21,575	12,609,949	\$1.95
1881.	8,208	2,639,002	1.63	1902. ...	26,329	14,138,740	2.37
1882.	9,283	3,043,394	1.47	1903. ...	28,092	13,345,230	3.00
1883.	10,176	3,552,402	1.14	1904. ...	29,119	12,427,468	1.75
1884.	10,543	3,192,105	1.13	1905. ...	30,842	17,896,526	2.26
1885.	10,471	3,096,012	1.22	1906. ...	34,059	19,999,326	2.75
1886.	10,952	4,180,521	1.36	1907. ...	35,697	19,029,058	2.90
1887.	11,923	4,146,989	1.79	1908. ...	37,842	10,700,022	1.80
1888.	13,975	4,955,553	1.19	1909. ...	39,158	17,785,832	2.00
1889.	14,458	5,930,428	1.34	1910. ...	39,137	18,689,722	2.10
1890.	16,020	6,464,156	1.94	1911. ...	38,904	16,334,174	1.72
1891.	17,204	4,760,665	1.87	1912. ...	38,884	20,000,873	1.92
1892.	17,256	6,329,452	1.83	1913. ...	39,067	20,097,901	2.95
1893.	17,513	4,805,623	1.49	1914. ...	37,965	14,075,638	2.00
1894.	17,834	5,454,451	1.00	1915. ...	38,986	17,921,216	1.80
1895.	17,947	8,244,438	1.23	1916. ...	38,362	21,654,502	2.58
1896.	18,351	5,411,602	1.90	1917. ...	38,110	17,806,181	6.25
1897.	18,628	6,915,052	1.65	1918. ...	37,061	16,138,590	7.25
1898.	18,643	8,460,112	1.55	1919. ...	35,758	10,254,640	4.70
1899.	19,689	10,129,764	2.00	1920. ...	35,678	10,750,227	8.30
1900.	20,954	10,166,234	2.70	.....	.....	.....	.....

SHIPMENTS OF POCAHONTAS FLAT TOP COKE, 1883-1920.

[From statistics compiled by the Norfolk & Western Railway Company.]

Calendar years.	Shipments. Net tons.	Calendar years.	Shipments. Net tons.	Calendar years.	Shipments. Net tons.
1883.	23,762	1896.	999,697	1909.	2,418,903
1884.	56,360	1897.	855,756	1910.	2,335,932
1885.	48,571	1898.	1,276,172	1911.	1,323,387
1886.	59,021	1899.	1,317,246	1912.	1,284,954
1887.	151,171	1900.	1,341,444	1913.	1,280,638
1888.	202,808	1901.	1,279,949	1914.	789,800
1889.	310,504	1902.	1,191,436	1915.	796,287
1890.	499,148	1903.	1,693,403	1916.	1,498,505
1891.	466,016	1904.	1,617,801	1917.	1,766,302
1892.	499,777	1905.	2,156,805	1918.	1,467,721
1893.	539,548	1906.	2,056,006	1919.	702,891
1894.	865,684	1907.	2,314,938	1920.	541,605
1895.	701,818	1908.	1,819,314	.....	.....

Of the shipments in 1920, 540,890 tons were line trade and 715 tons were tidewater, while in 1919, 699,470 tons were line trade and 3,421 tons were tidewater.

MISCELLANEOUS PRODUCTION STATISTICS.

The following table gives a summary of production of pig iron, steel and rolled products in the Youngstown District, which includes works in the Mahoning, Shenango and Beaver valleys and adjacent territory. This includes Trumbull, Mahoning and the northern part of Columbiana counties in Ohio, and Mercer, Lawrence and Beaver counties in Pennsylvania.

PRODUCTION OF IRON AND STEEL IN THE YOUNGSTOWN DISTRICT, GROSS TONS, 1917-1920.

	1917.	1918.	1919.	1920.
Blast furnaces, No.	50	51	52	53
Consumption of:				
Iron ore.	11,550,532	11,197,859	9,553,663	9,956,087
Cinder.	608,875	655,548	567,335	612,284
Limestone.	3,157,622	3,228,559	2,737,584	2,988,263
Production of pig iron.	6,476,051	6,250,611	5,394,827	5,617,057
Rolling mills and steel works, No..	45	47	47	49
Production of steel ingots and cast-ings:				
Open-hearth.	4,191,323	4,462,061	3,643,095	4,093,188
Bessemer.	3,099,917	2,843,455	2,367,789	2,491,531
Other.	28,913	20,680	10,642	20,870
Total.	7,320,153	7,326,196	6,021,526	6,605,589
Production of rolled products:				
Wire rods.	410,760	225,306	335,129	357,686
Plates and sheets.	1,081,585	1,133,712	1,015,170	1,450,455
Merchant bars (including concrete bars).	678,520	791,691	731,234	915,431
Skelp.	726,968	701,376	707,919	910,840
Other rolled products.	1,182,452	913,913	398,033	509,064
Total rolled products.	4,080,285	3,765,998	3,187,485	4,143,476

PRODUCTION OF IRON AND STEEL IN ALLEGHENY COUNTY, PENNSYLVANIA, FROM 1911 TO 1920.

Details.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
	Gross tons.	Gross tons.	Gross tons.	Gross tons.	Gross tons.	Gross tons.	Gross tons.	Gross tons.	Gross tons.	Gross tons.
Furnaces built and building. No.	47	47	47	47	47	47	48	48	48	48
Consumption of—										
Iron ore.	9,404,531	11,167,200	11,049,100	8,387,986	10,927,567	13,350,113	11,316,103	11,768,297	10,493,440	11,119,175
Mill cinder, scale, etc.	825,823	1,026,961	661,638	513,972	534,088	788,940	713,534	704,052	450,535	549,455
Limestone.	2,656,811	3,242,709	3,065,549	2,388,397	3,066,274	3,489,768	2,943,542	3,073,418	2,912,418	3,172,281
Production of pig iron.	5,116,442	6,107,226	5,999,539	4,665,893	5,970,407	7,239,913	6,226,601	6,357,660	5,719,842	6,170,881
Rolling mills and steel works. No.	66	65	65	62	62	60	64	64	64	67
Production of—										
Open-hearth steel.	4,980,426	5,777,672	5,809,778	4,610,274	6,367,036	7,270,060	7,019,703	6,607,777	5,888,774	6,500,793
Bessemer steel.	1,442,286	1,977,970	1,824,479	1,221,220	1,351,416	1,956,608	1,872,144	1,813,773	1,670,940	1,982,445
All other steel.	28,661	30,813	34,964	22,920	28,928	46,328	78,506	94,434	61,778	69,797
Total steel ingots and castings	6,451,373	7,786,455	7,669,221	5,854,414	7,747,380	9,272,996	8,970,353	8,515,984	7,621,492	8,553,035
Production of—										
All kinds of rails.	427,140	380,255	401,984	243,889	340,787	327,001	370,536	461,525	305,818	403,516
Structural shapes.	717,819	1,062,735	1,145,870	705,250	943,486	1,162,861	1,111,134	939,551	918,788	1,026,498
Plates and sheets.	1,113,794	1,426,310	1,401,321	1,004,915	1,439,117	1,643,205	1,738,299	2,040,390	1,668,591	1,765,051
*Merchant bars.	812,026	1,231,859	1,167,902	744,626	1,235,246	1,697,674	1,617,756	1,385,401	1,318,913	1,600,128
Skelp.	606,497	772,201	751,963	674,257	677,558	850,293	743,781	741,054	744,457	816,500
†Other rolled products.	826,876	1,141,745	1,154,745	818,674	1,097,356	1,563,371	1,353,321	1,293,208	903,142	1,042,993
Total rolled products.	4,504,152	6,015,105	6,023,785	4,191,611	5,733,550	7,244,401	6,934,827	6,881,129	5,859,709	6,654,686

* Concrete bars not included. † Includes semi-finished forms rolled for export in 1912 and subsequent years.

COMPARATIVE PRODUCTION OF LEADING IRON AND STEEL PRODUCTS BY THE UNITED STATES STEEL CORPORATION AND ALL OTHER COMPANIES FROM 1901 TO 1920.

Years.	PRODUCTION OF PIG IRON.				PRODUCTION OF STEEL INGOTS AND STEEL CASTINGS.				PRODUCTION OF ALL KINDS OF FINISHED ROLLED PRODUCTS.			
	Corporation.	All other.	Total.	Per cent. of Corp.	Corporation.	All other.	Total.	Per cent. of Corp.	Corporation.	All other.	Total.	Per cent. of Corp.
1901.	6,855,731	9,022,623	15,878,354	43.2	8,854,820	4,618,775	13,473,595	65.7	6,189,958	6,159,369	12,349,327	50.1
1902..	7,975,530	9,845,777	17,821,307	44.8	9,750,386	5,196,864	14,947,250	65.2	7,157,882	6,786,234	13,944,116	51.3
1903..	7,279,241	10,730,011	18,009,252	40.4	9,173,870	5,361,108	14,534,978	63.1	6,756,071	6,451,626	13,207,697	51.2
1904..	7,369,421	9,127,612	16,497,033	44.7	8,412,555	5,447,332	13,859,887	60.7	5,743,398	6,269,983	12,013,381	47.8
1905..	10,172,148	12,820,232	22,992,380	44.2	12,006,381	8,017,566	20,023,947	60.0	7,978,955	8,861,060	16,840,015	47.4
1906..	11,267,377	14,039,814	25,307,191	44.5	13,529,199	9,868,937	23,398,136	57.8	9,432,946	10,155,522	19,588,468	48.2
1907..	11,422,795	14,358,566	25,781,361	44.3	*13,343,019	10,019,575	23,362,594	57.1	*9,629,484	10,235,338	19,864,822	48.5
1908..	6,934,408	9,001,610	15,936,018	43.5	7,838,713	6,184,534	14,023,247	55.9	5,571,528	6,256,665	11,828,193	47.1
1909..	11,618,350	14,177,121	25,795,471	45.0	13,355,189	10,599,832	23,955,021	55.8	9,605,306	10,039,384	19,644,690	48.9
1910..	11,831,398	15,472,169	27,303,567	43.3	14,179,369	11,915,550	26,094,919	54.3	10,393,925	11,227,354	21,621,279	48.1
1911..	10,744,897	12,904,650	23,649,547	45.4	12,753,370	10,922,736	23,676,106	53.9	8,703,824	10,335,347	19,039,171	45.7
1912..	14,186,164	15,540,773	29,726,937	47.7	16,901,223	14,350,080	31,251,303	54.1	11,904,792	12,692,049	24,656,841	48.5
1913..	14,080,730	16,885,422	30,966,152	45.5	16,656,361	14,644,513	31,300,874	53.2	11,853,639	12,937,604	24,791,243	47.8
1914..	10,052,437	13,279,787	23,332,244	43.1	11,826,476	11,686,554	23,513,030	50.3	8,101,228	10,268,968	18,370,196	44.1
1915..	13,641,508	16,274,705	29,916,213	45.6	16,376,492	15,774,514	32,151,036	50.9	10,870,446	13,522,478	24,392,924	44.6
1916..	17,607,637	21,827,160	39,434,797	44.7	20,910,589	21,863,091	42,773,680	48.9	14,365,342	18,015,047	32,380,389	44.4
1917..	15,652,928	22,968,288	38,621,216	40.5	20,285,061	24,775,546	45,060,607	45.0	13,894,521	19,173,179	33,067,700	42.0
1918..	15,940,954	23,113,690	39,054,644	40.8	19,583,493	24,878,933	44,462,432	44.0	12,991,829	18,163,925	31,155,754	41.7
1919..	13,637,504	17,377,860	31,015,364	44.0	17,200,373	17,470,859	34,671,232	49.6	11,195,303	13,906,241	25,101,544	44.6
1920..	14,532,646	22,393,341	36,925,987	39.4	19,277,960	22,854,974	42,132,934	45.8	13,457,171	18,890,692	32,347,863	41.6

* For this and all subsequent years the production of the Tennessee Coal, Iron and Railroad Company is included.

PERCENTAGE OF PRODUCTION OF THE UNITED STATES STEEL CORPORATION IN 1920.

Products.	Production U. S. Steel Corporation.	Production all other companies.	Total production.	Percentage U. S. Steel Corporation.
Shipments of iron ore from the Lake Superior region*. Gross tons.	25,269,730	35,141,842	60,411,572	41.83
Total production of iron ore in the United States Gross tons.	27,021,009	40,583,456	67,604,465	39.97
Production of coke. Net tons.	16,208,111	35,679,889	51,888,000†	31.24
Spiegeleisen and ferro-manganese.	179,813	227,083	406,896	44.19
Bessemer, basic, low-phosphorus, foundry, forge, ferro-silicon, etc.	14,352,833	22,166,258	36,519,091	39.30
Total pig iron, including spiegeleisen, ferro-manganese, ferro-silicon, etc. Gross tons.	14,532,646	22,393,341	36,925,987	39.36
Total production of steel ingots and castings. Gross tons	19,277,960	22,854,974	42,132,934	45.75
Steel rails, including Bessemer, open-hearth, electric, re-rolled, renewed, etc.	1,512,665	1,091,451	2,604,116	58.09
Structural shapes.	1,450,231	1,856,517	3,306,748	43.86
Plates and sheets, including black plates for tinning.	3,717,824	5,619,856	9,337,680	39.82
Wire rods.	1,757,682	1,379,225	3,136,907	56.03
Other finished rolled products, including nail plate, merchant bars, rolled forging blooms and billets, semi-finished products rolled for export, etc. }	5,018,769	8,943,643	13,962,412	35.94
Total of the rolled products enumerated above. Gross tons.	13,457,171	18,890,692	32,347,863	41.60
Wire nails. Kegs of 100 pounds.	8,879,978	7,569,528	16,449,506	53.98
Tinplates and terne plates. Gross tons.	648,148	788,538	1,436,686	45.11

* In this line shipments are given instead of production. † Estimated by the United States Geological Survey.

PERCENTAGE OF PRODUCTION OF THE UNITED STATES STEEL CORPORATION IN 1919.

Products.	Production U. S. Steel Corporation.	Production all other companies.	Total production.	Percentage U. S. Steel Corporation.
Shipments of iron ore from the Lake Superior region*. Gross tons.	22,426,217	26,120,434	48,546,651†	46.20
Total production of iron ore in the United States. Gross tons.	25,423,093	35,542,325	60,965,418	41.70
Production of coke. Net tons.	15,463,649	29,329,893	44,793,542†	34.52
Spiegeleisen and ferro-manganese. Gross tons.	153,322	116,281	269,603	56.87
Bessemer, basic, low-phosphorus, foundry, forge, ferro-silicon, etc. Gross tons.	13,484,182	17,261,579	30,745,761	43.86
Total pig iron, including spiegeleisen, ferro-manganese, ferro-silicon, etc. Gross tons.	13,637,504	17,377,860	31,015,364	43.97
Total production of steel ingots and castings. Gross tons.	17,200,373	17,470,859	34,671,232	49.61
Steel rails, including Bessemer, open-hearth, electric, rerolled, renewed, etc. Gross tons.	1,365,587	838,256	2,203,843	61.96
Structural shapes. Gross tons.	1,144,165	1,469,871	2,614,036	43.77
Plates and sheets, including black plates for tinning. Gross tons.	3,266,174	4,106,640	7,372,814	44.30
Wire rods. Gross tons.	1,406,805	1,131,671	2,538,476	55.42
Other finished rolled products, including nail plate, merchant bars, rolled forging blooms and billets, semi-finished products rolled for export, etc. Gross tons.	4,012,572	6,359,803	10,372,375	38.69
Total of the rolled products enumerated above. Gross tons.	11,195,303	13,906,241	25,101,544	44.60
Wire nails. Kegs of 100 pounds.	6,790,034	6,304,187	13,094,221	51.86
Timplates and terne plates. Gross tons.	557,468	593,430	1,150,898	48.44

* In this line shipments are given instead of production.

† Revised.

† Estimated by the United States Geological Survey.

IMPORTS AND EXPORTS.

IMPORTS OF IRON AND STEEL, GROSS TONS, CALENDAR YEARS.

Products.	1916.	1917.	1918.	1919.	1920.
Pig iron (inc. ferro-mang., etc.)	135,349	76,786	34,711	101,665	185,944
Scrap*	125,133	188,567	70,419	182,549	140,645
Bar iron	7,701	2,240	1,469	1,940	4,987
Wire rods	4,130	1,060	7,677	342	5,488
Rails	26,299	9,263	8,705	17,008	45,684
Steel ingots, billets, blooms	26,142	44,197	41,076	16,269	24,232
Sheets and plates	1,730	1,748	1,517	1,095	1,792
Tinplates, terne plates	1,008	124	32	242	400
Structural shapes	1,473	6,216	3,504	1,154	1,685
Total	328,965	330,201	169,110	322,264	410,857

* Includes tinplate scrap.

EXPORTS OF IRON AND STEEL, GROSS TONS, CALENDAR YEARS.

Products.	1916.	1917.	1918.	1919.	1920.
Pig iron	607,236	656,220	269,575	321,261	216,828
Scrap and old iron and steel	212,765	145,574	2,160	27,275	219,250
Bar iron	74,069	56,332	63,367	60,547	46,648
Steel wire rods	158,284	181,941	148,523	118,010	116,775
Steel bars or rods ex. wire rods	774,455	626,465	579,249	554,211	629,051
Steel rails	540,828	512,669	453,537	652,443	594,628
Billets, ingots, and blooms	1,504,562	2,017,113	1,786,189	258,424	216,873
Galvanized iron and steel sheets and plates	85,304	86,487	68,742	101,638	108,369
Iron sheets and plates	46,499	62,238	40,756	39,892	32,157
Steel plates	276,034	525,670	551,967	710,013	920,959
Ship and tank plates, punched and shaped	.....	*19,781	29,250	13,688	42,829
Steel sheets	107,721	157,353	163,421	177,466	169,244
Structural iron and steel	300,594	294,150	232,729	360,787	493,633
Hoop, band, and scroll	43,208	58,769	50,673	50,836	53,449
Tinplates, terne plates, tag. tin	227,391	232,799	258,538	204,521	226,410
Bolts, nuts, rivets, and washers	29,226	32,261	28,332	39,742	38,944
Horseshoes	7,806	8,403	2,857	3,385	1,834
Wire, barbed	418,882	193,471	235,083	101,451	129,710
Wire, all other	264,142	201,474	157,222	190,212	190,969
Cut nails and cut spikes	4,752	4,525	3,824	2,921	3,858
Railroad spikes	23,852	21,189	9,969	24,771	16,601
Wire nails and wire spikes	150,173	114,913	78,726	89,779	93,178
All other nails, including tacks	12,354	19,350	11,792	16,234	12,436
Cast pipe and fittings	70,223	77,528	55,961	39,455	68,417
Wrought pipe and fittings	158,350	127,191	89,982	236,080	284,771
Radiators, etc.	2,424	5,201	2,857	4,656	7,336
Total.....Gross tons.	6,101,134	6,439,067	5,375,281	4,399,698	4,935,157

* From July 1, 1917.

IMPORTS OF PIG IRON, SPIEGELEISEN, FERRO-MANGANESE, AND FERRO SILICON, GROSS TONS, 1916-1920.

Countries.	1916.	1917.	1918.	1919.	1920.
Germany.....	341	.....	.....	.....	.....
United Kingdom.....	89,764	51,634	28,392	32,491	74,216
Canada.....	33,716	21,143	5,692	63,091	101,071
China.....	8,861	3,503	.....	8	3,555
Other countries.....	2,667	506	627	6,075	7,102
Total.....	135,349	76,786	34,711	101,665	185,944

In addition to the countries named above we imported 3,851 gross tons of pig iron from Japan in 1920, 1,977 tons from British India, 498 tons from Australia, 466 tons from Brazil, and 310 tons from other countries.

EXPORTS OF PIG IRON TO FOREIGN COUNTRIES, GROSS TONS, CALENDAR YEARS, 1916-1920.

Countries.	1916.	1917.	1918.	1919.	1920.
Canada.....	101,295	153,745	122,325	33,751	56,100
Austria-Hungary.....	.....	.....	.....	417	.....
Italy.....	234,213	184,763	41,641	136,997	36,128
United Kingdom.....	90,921	147,680	74,101	46,009	16,995
Australia and Tasmania	433	257	30	259	485
Japan.....	5,033	30,809	11,986	49,734	13,448
Netherlands.....	22,464	2,124	.....	5,220	20,384
Argentina.....	380	2,580	129	4,137	2,121
Belgium.....	.....	.....	.....	8,625	28,680
France.....	71,226	65,618	8,181	683	451
Denmark.....	17,380	1,836	.....	5,776	2,238
Mexico.....	676	920	297	1,103	2,348
Panama.....	1,968	1,816	881	483	624
Cuba.....	5,338	4,243	892	1,331	1,268
Brazil.....	1,176	1,483	72	979	951
Chile.....	6,500	8,888	4,345	6,611	2,545
Peru.....	682	578	694	1,253	280
Philippines.....	25	916	995	853	787
Other countries.....	47,526	47,964	3,006	17,040	*30,995
Total.....	607,236	656,220	269,575	321,261	216,828

* Includes 14,074 tons exported to Germany, 8,207 tons to Sweden, 2,649 tons to Switzerland, 1,651 tons to Dutch East Indies, 1,510 tons to Norway, 707 tons to China, 646 tons to Finland, 423 tons to Colombia, and 1,128 tons to other countries.

IMPORTS FOR CONSUMPTION OF SPIEGELEISEN AND FERRO-MANGANESE, 1903-1920.

Calendar years.	Spiegeleisen—Gross tons.			Ferro-manganese—Gross tons.		
	Tons.	Values.	Average value per ton.	Tons.	Values.	Average value per ton.
1903.	122,016	\$2,709,317	\$22.20	41,518	\$1,699,666	\$40.94
1904.	4,623	132,461	28.65	21,814	707,037	32.41
1905.	55,457	1,336,104	24.09	52,841	1,884,651	35.67
1906.	103,267	2,942,940	28.50	84,359	4,953,644	58.72
1907.	48,995	1,399,381	28.56	87,400	5,354,656	61.27
1908.	4,579	125,054	27.31	44,624	1,860,664	41.70
1909.	16,921	353,447	20.89	88,934	3,396,381	38.19
1910.	25,383	489,049	19.27	114,278	4,341,071	37.99
1911.	20,970	405,444	19.33	80,263	3,015,062	37.56
1912.	1,015	28,094	27.68	99,137	3,906,920	39.41
1913.	77	2,173	28.22	128,070	5,682,915	44.37
1914.	2,870	71,147	24.79	82,997	4,619,607	43.61
1915.	200	5,110	25.55	55,263	3,333,699	60.32
1916.				90,928	9,240,528	101.62
1917.	3,968	291,594	73.49	41,969	5,710,988	136.08
1918.	1,969	228,012	115.80	26,906	4,300,604	159.84
1919.	27	1,018	37.70	33,022	4,283,541	129.72
1920.	5,234	277,900	53.10	59,254	7,775,278	131.22

IMPORTS FOR CONSUMPTION OF FERRO-SILICON AND PIG IRON, 1903-1920.

Calendar years.	Ferro-silicon—Gross tons.			Bessemer, basic, foundry, forge, etc., pig iron—Gross tons.		
	Tons.	Values.	Average value per ton.	Tons.	Values.	Average value per ton.
1903.	14,880	\$379,900	\$25.53	414,981	\$6,302,604	\$15.19
1904.	3,691	184,229	49.91	49,219	730,582	14.84
1905.	11,044	558,906	50.61	93,124	1,406,123	15.10
1906.	11,863	788,085	66.43	174,540	2,950,610	16.90
1907.	14,825	1,049,283	70.78	328,672	5,409,540	16.46
1908.	5,532	281,590	50.90	32,784	558,796	17.04
1909.	12,802	504,821	39.43	57,831	910,584	15.75
1910.	11,391	527,157	46.28	93,740	1,489,710	15.89
1911.	6,659	341,681	51.31	38,685	586,403	15.16
1912.	7,489	446,456	59.61	18,386	318,208	17.31
1913.	7,208	449,871	62.41	23,586	450,910	19.12
1914.	6,149	341,925	55.61	39,213	588,252	15.00
1915.	5,128	310,219	60.50	28,937	459,241	15.87
1916.	6,740	384,384	57.03	36,850	608,851	16.52
1917.	9,740	691,684	71.01	20,526	1,172,869	57.14
1918.	5,540	424,932	76.70	381	16,154	42.40
1919.	10,445	629,362	60.25	58,171	1,651,185	28.39
1920.	13,909	719,446	51.73	107,547	4,029,210	37.46

EXPORTS OF STEEL RAILS, CALENDAR YEARS, 1916-1920.

Countries.	1916.	1917.	1918.	1919.	1920.
Canada.....	41,081	48,293	66,558	25,580	15,658
Cent. America and Brit. Hond.	4,948	5,235	3,049	9,197	14,173
Mexico.....	3,953	4,091	1,226	10,670	8,801
West Indies and Bermuda.....	89,518	64,095	49,356	61,990	129,028
Argentina.....	1,555	122	20	855	17,107
Brazil.....	2,708	1,985	.....	8,816	50,982
Other South America.....	19,161	22,730	10,145	25,829	34,627
Japan.....	2,979	75,113	80,865	152,997	135,873
Other Asia and Oceania.....	69,956	62,681	17,735	111,010	87,217
Other countries.....	304,969	228,324	224,583	245,499	*101,162
Total.....Gross tons.	540,828	512,669	453,537	652,443	594,628

* Includes 22,482 tons exported to British South Africa, 15,339 tons to Sweden, 14,859 tons to United Kingdom, 11,950 tons to France, 11,110 tons to French Africa, 9,962 tons to Denmark, 6,185 tons to Spain, 2,173 tons to Russia in Europe, 1,547 tons to Portuguese Africa, 1,316 tons to Greece, and 4,239 tons to other countries.

EXPORTS OF STRUCTURAL SHAPES, CALENDAR YEARS, 1916-1920.

Countries.	1916.	1917.	1918.	1919.	1920.
Canada.....	111,758	117,306	111,118	99,032	137,930
Panama.....	5,103	3,107	1,107	532	1,344
Mexico.....	3,597	3,618	880	3,906	11,238
Cuba.....	38,260	29,359	11,112	23,600	47,703
South America.....	22,571	24,224	11,079	35,201	60,301
Japan.....	24,405	35,514	24,197	49,920	89,839
British Oceania.....	14,150	6,227	1,725	3,290	4,410
Philippines.....	940	1,021	717	5,062	6,330
Other countries.....	79,810	73,774	70,794	140,244	*134,538
Total.....Gross tons.	300,594	294,150	232,729	360,787	493,633

* Includes 39,840 tons to British India, 13,872 tons to France, 12,159 tons to Dutch East Indies, 10,153 tons to United Kingdom, 8,028 tons to Netherlands, 6,758 tons to Italy, 6,037 tons to China, 4,995 tons to Spain, 4,796 tons to Roumania, 3,387 tons to Germany, 3,160 tons to Hongkong, 2,926 tons to Sweden, 2,571 tons to Norway, 2,435 tons to Denmark, and 13,421 tons to other countries.

EXPORTS OF WIRE RODS, CALENDAR YEARS, 1916-1920.

Countries.	1916.	1917.	1918.	1919.	1920.
Canada.....	59,310	44,754	39,230	27,169	28,787
United Kingdom.....	51,056	41,965	15,515	22,080	19,528
France.....	36,148	22,291	24,913	14,626	314
Japan.....	3,489	23,391	29,523	32,079	41,375
Spain.....	1,315	1,070	849	7	812
Other countries.....	6,966	48,470	38,493	22,049	*25,959
Total.....Gross tons.	158,284	181,941	148,523	118,010	116,775

* Includes 7,708 tons to China, 4,028 tons to Denmark, 3,890 tons to Italy, 3,713 tons to Sweden, 1,202 tons to Argentina, 1,148 tons to Brazil, 1,139 tons to Norway, 1,020 tons to Hongkong, 659 tons to Netherlands, and 1,452 tons to other countries.

EXPORTS OF PLATES AND SHEETS, BY COUNTRIES, 1920.

Countries.	Galvanized sheets and plates. Pounds.	Iron sheets and plates. Pounds.	Steel plates. Pounds.	Steel sheets. Pounds.	Ship and tank plates, punched and shaped. Pounds.	Total. Pounds.
United King- dom.	235,475	9,162,507	330,560,365	2,772,480	19,902,063	362,632,890
Canada.	56,164,437	27,449,859	465,532,544	140,932,721	1,939,913	692,019,474
Panama.	1,724,225	34,245	6,274,792	690,949	.....	8,724,211
Mexico.	10,495,963	3,205,271	17,955,944	7,841,178	21,859,688	61,358,044
Cuba.	28,202,098	1,614,215	31,520,732	10,212,379	10,170,658	81,720,082
Argentina. ...	28,012,972	2,007,194	23,305,584	29,955,412	2,126,073	85,407,235
Brazil.	8,938,074	3,941,383	11,874,771	7,899,439	2,700,279	35,353,946
Chili.	7,189,500	121,872	8,375,540	4,864,046	253,028	20,803,986
Uruguay.	2,602,824	.....	2,251,729	1,273,605	149,190	6,277,348
British India.	16,262,061	382,839	46,290,598	3,589,021	687,075	67,211,594
Japan.	11,941,460	16,461,713	492,192,010	120,339,857	13,002,209	653,937,249
Australia and Tasmania..	3,470,757	1,207,256	42,567,337	3,124,562	911,208	51,281,120
Philippines..	8,088,597	700,407	4,143,384	2,254,068	1,136,646	16,323,102
Other coun- tries.	59,416,865	5,743,842	580,102,413	43,356,205	21,099,323	709,718,648
Total.	242,745,308	72,032,603	2,062,947,743	379,105,922	95,937,353	2,852,768,929
Net tons.	121,373	36,016	1,031,474	189,553	47,969	1,426,385
Gross tons..	108,369	32,157	920,959	169,244	42,829	1,273,558

EXPORTS OF PLATES AND SHEETS, BY COUNTRIES, CALENDAR YEARS, 1916-1920.

Countries.	1916. Pounds.	1917.* Pounds.	1918. Pounds.	1919. Pounds.	1920. Pounds.
United Kingdom	65,691,616	28,518,890	157,258,372	83,827,470	362,632,890
Canada.	511,869,353	579,843,711	600,573,504	598,629,286	692,019,474
Panama.	13,220,889	11,672,773	2,808,967	2,120,749	8,724,211
Mexico.	6,983,790	13,481,643	8,513,289	30,617,902	61,358,044
Cuba.	49,573,764	25,406,575	20,603,425	41,177,064	81,720,082
Argentina.	38,442,493	34,751,767	18,640,645	46,486,429	85,407,235
Brazil.	17,226,599	15,354,646	10,264,527	29,722,560	35,353,946
Chile.	17,875,742	24,344,969	17,569,656	22,034,308	20,803,986
Uruguay.	2,112,166	2,479,550	2,686,537	6,662,840	6,277,348
British India..	12,778,925	47,369,955	22,945,648	25,850,608	67,211,594
Japan.	200,387,917	710,274,147	431,711,143	678,842,665	653,937,249
Australia†.	25,975,250	28,281,163	59,203,957	65,497,082	51,281,120
Philippines.	9,281,083	10,311,240	19,652,481	28,589,667	16,323,102
Other countries	183,431,308	375,334,362	540,831,486	675,583,738	709,718,648
Total.	1,154,850,895	1,907,425,391	1,913,263,637	2,335,642,368	2,852,768,929

* Includes ship and tank plates, punched and shaped, exported from July 1, 1917.

† Includes Tasmania.

**EXPORTS OF CUT NAILS BY COUNTRIES, 100-LB. KEGS,
CALENDAR YEARS, 1916-1920.**

Countries.	1916.	1917.	1918.	1919.	1920.
Canada.....	574	4,094	946	1,356	1,779
Panama.....	184	44	34	1,333	215
Mexico.....	4,490	1,596	2,380	4,347	6,699
Cuba.....	14,157	17,325	17,883	13,100	18,267
Brazil.....	671	259	312	1,854	306
Chili.....	30,983	39,449	33,306	10,894	38,150
Colombia.....	1,240	109	216	271	95
Dominican Republic.....	762	496	432	353	1,411
Australia and Tasmania.....	1,346	208	295	1,110	112
New Zealand.....	1,371	630	5,785	1,630	29
Other countries.....	50,673	37,152	24,079	29,175	19,364
Total.....	106,451	101,362	85,668	65,423	86,427

**EXPORTS OF WIRE NAILS BY COUNTRIES, 100-LB. KEGS,
CALENDAR YEARS, 1916-1920.**

Countries.	1916.	1917.	1918.	1919.	1920.
United Kingdom...	1,154,734	800,491	232,320	258,392	184,673
Canada.....	76,091	215,075	83,996	24,444	30,387
Panama.....	28,519	10,153	4,778	11,228	8,614
Cuba.....	106,579	63,606	57,316	81,668	154,413
China.....	212,447	206,466	104,770	202,552	273,820
British India.....	141,848	115,549	140,758	153,723	55,403
Dutch East Indies..	113,598	126,870	83,222	129,633	174,770
Japan.....	560,071	263,868	393,623	363,241	650,613
New Zealand.....	29,158	16,094	14,325	35,048	11,040
Philippines.....	48,131	52,953	67,516	53,415	53,614
Other countries.....	892,700	702,929	580,836	697,701	489,848
Total.....	3,363,876	2,574,054	1,763,460	2,011,045	2,087,195

**EXPORTS OF IRON AND STEEL WIRE, INCLUDING BARBED WIRE,
POUNDS, CALENDAR YEARS, 1916-1920.**

Countries.	1916.	1917.	1918.	1919.	1920.
Canada.....	133,380,747	109,094,114	75,159,975	97,123,103	108,542,954
Mexico.....	3,609,808	5,562,125	4,500,083	9,036,569	11,394,846
Cuba.....	26,209,409	17,123,206	8,573,746	36,404,922	37,654,240
Argentina.....	100,898,863	71,402,961	43,734,235	132,511,618	147,985,593
Brazil.....	49,846,882	65,655,015	17,911,132	92,800,621	109,138,537
Other So.Amer.	47,476,356	40,074,040	17,360,979	55,574,530	59,662,506
British Oceania	*34,738,609	*29,707,138	24,486,395	50,984,820	69,684,234
British Africa.	4,861,674	9,524,673	4,080,719	20,385,230	18,764,383
Other countries	1,128,952,941	536,533,141	682,956,872	158,502,946	155,493,066†
Total.....	1,529,975,289	884,676,413	878,764,136	653,324,359	718,320,359

* Australia only. † Includes Japan, 77,675,726 pounds; United Kingdom, 13,891,833 pounds; China, 12,659,470 pounds; Hongkong, 7,794,026 pounds; Dominican Republic, 6,017,991 pounds; other countries, 37,454,020 pounds.

IMPORTS AND EXPORTS OF TINPLATES AND TERNE PLATES.

QUANTITIES AND VALUES OF TINPLATES AND TERNE PLATES IMPORTED INTO THE UNITED STATES, 1889-1920.

Fiscal years.	United Kingdom.		All other countries.		Total.	
	Pounds.	Values.	Pounds.	Values.	Pounds.	Values.
1889	734,211,853	\$21,174,529	1,568,135	\$48,124	735,779,988	\$21,222,653
1890	678,933,940	20,891,062	1,126,985	37,088	680,060,925	20,928,150
1891	1,033,531,124	35,645,076	2,957,950	101,844	1,036,489,074	35,746,920
1892	421,838,482	12,304,233	337,720	11,329	422,176,202	12,315,562
1893	628,095,497	17,554,310	330,405	11,330	628,425,902	17,565,640
1894	453,880,341	11,961,524	280,485	7,994	454,160,826	11,969,518
1895	507,075,599	12,119,083	963,339	24,997	508,038,938	12,144,080
1896	383,882,250	8,915,083	1,256,733	35,573	385,138,983	8,950,656
1897	229,208,495	5,320,238	865,188	24,400	230,073,683	5,344,638
1898	170,872,133	3,786,626	790,212	22,522	171,662,345	3,809,148
1899	107,831,639	2,592,106	653,187	21,458	108,484,826	2,613,564
1900	147,321,985	4,772,629	641,819	27,167	147,963,804	4,799,796
1901	116,829,478	3,733,480	1,050,834	36,582	117,880,312	3,770,062
1902	197,232,677	5,995,515	1,763,409	70,109	198,996,086	6,065,624
1903	109,605,243	3,195,624	308,050	14,291	109,913,293	3,209,915
1904	126,502,829	3,459,124	406,531	14,330	126,909,360	3,473,454
1905	160,827,056	4,550,335	239,764	8,540	161,066,820	4,558,875
1906	120,627,726	3,402,987	192,006	9,256	120,819,732	3,412,243
1907	142,273,310	4,637,211	256,096	14,121	142,529,406	4,651,332
1908	140,502,522	4,279,862	237,450	12,091	140,739,972	4,291,953
1909	116,860,827	3,202,311	451,347	23,040	117,312,174	3,225,351
1910	153,704,447	4,315,459	862,152	39,670	154,566,599	4,355,129
1911	94,759,014	2,993,670	560,716	28,782	95,319,730	3,022,452
1912	5,954,894	249,626	658,359	37,321	6,613,253	286,947
1913	27,993,475	946,538	350,768	25,282	28,344,243	971,820
1914	48,501,287	1,460,792	376,660	20,666	48,877,947	1,481,458
1915	10,462,673	339,373	179,564	14,101	10,642,237	353,474
1916	1,709,840	132,959	87,013	8,485	1,796,853	141,444
1917	1,215,502	128,676	154,960	19,203	1,370,462	147,879
1918	6,220	1,164	65,183	4,800	71,403	5,964
1919	153,027	13,104	3,450	419	156,477	13,523
1920	757,369	101,487	87,216	10,165	844,585	111,652

RE-EXPORTS OF TINPLATES.

Virtually all of the tinplates imported from 1898 to 1912 were re-exported, thus obtaining the benefit of the drawback of 99 per cent. of the duty paid.

EXPORTS OF TINPLATES AND TERNE PLATES.

In the calendar year 1920 our exports of domestic tinplates and terne plates amounted to 226,410 gross tons, against 204,521 tons in 1919, 258,538 tons in 1918, 232,799 tons in 1917, 227,391 tons in 1916, and 154,642 tons in 1915.

EXPORTS OF TINPLATES AND TERNE PLATES BY COUNTRIES,
IN POUNDS, CALENDAR YEARS, 1916-1920.

Countries.	1916.	1917.	1918.	1919.	1920.
Canada.	115,266,798	132,658,753	144,960,580	92,288,376	141,321,397
United Kingdom	54,205,504	8,897,245	313,758	2,886,294	10,521,139
Mexico.	3,828,929	4,785,837	4,527,210	9,575,762	9,422,582
Cuba.	9,380,662	8,219,686	4,357,962	6,289,947	10,371,716
Argentina.	48,600,069	64,758,592	87,642,433	53,266,486	5,179,804
Brazil.	29,071,203	28,702,237	28,087,364	31,500,438	49,410,191
Chile.	7,418,535	6,296,212	2,573,689	4,228,612	3,708,341
China.	21,731,967	23,335,601	24,597,702	37,966,278	43,598,384
British India. .	48,300,269	29,800,489	13,706,054	23,623,211	7,440,837
Hongkong.	29,894,579	23,226,860	18,136,737	17,690,944	16,300,063
Japan.	54,230,362	48,986,444	82,080,957	101,837,517	111,454,536
Other countries	87,427,278	141,801,129	168,141,011	76,973,729	*98,429,221
Total.	509,356,155	521,469,085	579,125,457	458,127,594	507,158,211

* Includes 13,994,902 pounds to Italy, 12,042,415 pounds to France, 9,545,051 pounds to Straits Settlements, 8,579,948 pounds to Australia, 6,536,385 pounds to Peru, 6,485,478 pounds to Dutch East Indies, 6,016,128 pounds to Spain, 4,986,857 pounds to Netherlands, 4,027,414 pounds to Sweden, 2,655,503 pounds to Portugal, 2,582,103 pounds to Belgium, 2,472,089 pounds to Kwantung, leased territory; 2,295,547 pounds to New Zealand, 2,017,944 pounds to Philippine Islands, 1,826,197 pounds to British South Africa, 1,451,726 pounds to French Africa, 1,425,921 pounds to Venezuela, 1,000,990 pounds to Egypt, 993,605 pounds to Denmark, and 7,493,018 pounds to other countries.

IMPORTS AND EXPORTS OF AGRICULTURAL
IMPLEMENTS.

IMPORTS OF AGRICULTURAL IMPLEMENTS, 1916-1920.

The value of the agricultural implements imported for consumption into the United States in the calendar year 1920, including plows, harrows, harvesters, reapers, drills, etc., amounted to \$5,716,573, as compared with \$3,355,668 in 1919, \$727,227 in 1918, \$454,263 in 1917, and \$379,851 in 1916.

EXPORTS OF AGRICULTURAL IMPLEMENTS, 1891-1920.

Years.	Values.	Years.	Values.	Years.	Values.
1891.	\$3,310,183	1901.	\$16,714,308	1911.	\$36,241,683
1892.	4,210,684	1902.	17,981,597	1912.	41,436,327
1893.	5,191,223	1903.	22,951,805	1913.	35,453,643
1894.	4,765,793	1904.	21,654,892	1914.	21,649,523
1895.	5,319,885	1905.	22,124,312	1915.	13,582,849
1896.	4,643,729	1906.	24,744,762	1916.	21,229,774
1897.	5,302,807	1907.	25,597,272	1917.	33,264,649
1898.	9,073,384	1908.	25,264,939	1918.	32,849,164
1899.	13,594,524	1909.	27,327,428	1919.	41,195,494
1900.	15,979,909	1910.	31,291,351	1920.	46,277,269

IMPORTS OF IRON ORE, CALENDAR YEARS, 1881-1920.

Years.	Gross tons.	Years.	Gross tons.	Years.	Gross tons.	Years.	Gross tons.
1881..	782,887	1891..	912,856	1901..	966,950	1911..	1,811,732
1882..	589,655	1892..	806,585	1902..	1,165,470	1912..	2,104,576
1883..	490,875	1893..	526,951	1903..	980,440	1913..	2,594,770
1884..	487,820	1894..	168,541	1904..	487,613	1914..	1,350,588
1885..	390,786	1895..	524,153	1905..	845,651	1915..	1,341,281
1886..	1,039,433	1896..	682,806	1906..	1,060,390	1916..	1,326,864
1887..	1,194,301	1897..	489,970	1907..	1,229,168	1917..	971,663
1888..	587,470	1898..	187,093	1908..	776,898	1918..	787,468
1889..	853,573	1899..	674,082	1909..	1,694,957	1919..	476,461
1890..	1,246,830	1900..	897,831	1910..	2,591,031	1920..	1,273,456

IMPORTS OF IRON ORE BY CUSTOMS DISTRICTS, GROSS TONS.

Districts.	1916.	1917.	1918.	1919.	1920.
Maryland.....	493,611	465,472	602,674	236,053	826,338
Philadelphia...	664,181	282,212	69,356	213,018	261,100
New York.....	101	5,625	2	10	141,158
Ohio.....	62,984	81,187	50,362	180	5,430
All other.....	105,987	137,167	65,074	27,200	39,430
Total.....	1,326,864	971,663	787,468	476,461	1,273,456

IMPORTS OF IRON ORE BY COUNTRIES, GROSS TONS.

Countries.	1916.	1917.	1918.	1919.	1920.
Cuba.....	716,571	546,069	632,442	321,753	889,852
Sweden.....	212,063	63,715	.....	61,540	63,861
Chile.....	60,701	.....	.....	.....	.....
Canada.....	137,963	195,588	115,354	12,383	34,084
Spain.....	161,422	152,713	38,385	63,737	69,915
French Africa..	38,004	8,860	.....	.....	158,879
United Kingdom	140	4,717	82	180	315
Other countries	.....	1	1,205	16,868	56,550
Total.....	1,326,864	971,663	787,468	476,461	1,273,456

EXPORTS OF IRON ORE.

Exports of iron ore in 1920 amounted to 1,145,037 gross tons, virtually all to Canada, against 996,569 tons in 1919.

IMPORTS OF MANGANESE ORE BY COUNTRIES, GROSS TONS.

Countries.	1916.	1917.	1918.	1919.	1920.
Cuba.....	30,563	44,511	82,974	35,320	8,247
Brazil.....	471,837	512,517	345,877	246,592	421,523
British India..	51,960	48,975	29,275	9,200	71,238
Japan.....	5,196	2,745	709	651	474
Other countries	16,765	21,224	32,468	41,581	105,455
Total.....	576,321	629,972	491,303	333,344	606,937

AVERAGE MONTHLY AND YEARLY PRICES.

DOMESTIC PRICES OF IRON AND STEEL.

YEARLY PRICES OF LEADING PRODUCTS OF IRON AND STEEL.

[Compiled from quotations in The Iron Age and from other authoritative sources.]

Years.	Bessemer pig iron, at Pittsburgh.	Basic pig iron, in the Valleys.	Southern No. 2, at Cincinnati.	Local No. 2, at Chicago (at fur- nace after 1907).	Bessemer steel rails, at mills in Pennsylvania.	Bessemer billets, at Pittsburgh.	Soft steel bars, at Pittsburgh.	†Iron bars, at Pitts- burgh.	Tank plate, at Pitts- burgh.	Beams, at Pitts- burgh.
1887.	\$21.37	.....	\$20.05	.....	\$37.08	\$31.82	.....	\$1.95	.....	.....
1888.	17.38	.....	16.82	\$17.19	29.83	28.75	.....	1.77	.....	.....
1889.	18.00	.....	14.85	15.77	29.25	29.33	.....	1.71	.....	.....
1890.	18.87	.....	15.11	16.66	31.78	30.29	.....	1.84	.....	.....
1891.	15.95	.....	13.78	14.95	29.92	25.33	.....	1.71	.....	.....
1892.	14.37	.....	12.74	13.88	30.00	23.63	.....	1.64	.....	.....
1893.	12.87	.....	11.42	12.80	28.12	20.44	.....	1.50	.....	.....
1894.	11.38	.....	9.93	10.56	24.00	16.58	.....	1.20	.....	.....
1895.	12.72	.....	10.86	11.80	24.33	18.48	.....	1.25	.....	.....
1896.	12.14	.....	10.29	11.64	28.00	18.83	.....	1.21	.....	.....
1897.	10.13	.....	9.42	10.68	18.75	15.08	.....	1.10	.....	.....
1898.	10.33	.....	9.46	11.32	17.62	15.31	\$0.95	1.07	\$1.08	\$1.17
1899.	19.03	.....	16.58	18.40	28.12	31.12	1.84	1.95	2.21	1.81
1900.	19.49	.....	17.04	19.47	32.29	25.06	1.59	2.15	1.54	1.91
1901.	15.93	.....	13.61	15.38	27.33	24.13	1.42	1.80	1.55	1.58
1902.	20.67	.....	20.00	20.86	28.00	30.57	1.58	1.94	1.70	1.81
1903.	18.98	.....	17.08	19.25	28.00	27.91	1.56	1.77	1.61	1.62
1904.	13.76	*\$12.59	12.73	14.37	28.00	22.18	1.33	1.48	1.54	1.54
1905.	16.36	15.25	15.57	17.65	28.00	24.03	1.48	1.87	1.58	1.62
1906.	19.54	18.10	18.37	20.43	28.00	27.45	1.51	1.93	1.61	1.70
1907.	22.84	20.87	23.10	24.50	28.00	29.25	1.60	1.94	1.70	1.70
1908.	17.07	15.16	15.54	17.57	28.00	26.31	1.49	1.60	1.64	1.64
1909.	17.41	15.48	16.12	17.49	28.00	24.62	1.33	1.62	1.42	1.42
1910.	17.19	14.76	15.16	17.09	28.00	25.38	1.44	1.65	1.47	1.45
1911.	15.71	13.07	13.67	14.83	28.00	21.46	1.26	1.41	1.31	1.32
1912.	15.94	13.92	14.93	15.32	28.00	22.38	1.29	1.44	1.33	1.32
1913.	17.13	14.71	14.90	15.85	28.00	25.79	1.55	1.69	1.50	1.50
1914.	14.89	12.87	13.41	13.60	28.00	20.09	1.15	1.32	1.14	1.15
1915.	15.78	13.74	13.57	14.01	28.00	22.44	1.31	1.48	1.31	1.30
1916.	23.86	19.76	18.67	20.26	32.00	43.95	2.67	2.13	3.53	2.55
1917.	43.64	38.90	38.95	41.31	38.00	70.96	3.64	3.83	5.88	3.67
1918.	36.67	32.50	36.56	33.25	55.00	47.33	2.89	4.31	3.24	2.99
1919.	31.12	27.67	32.17	29.11	47.29	40.54	2.49	4.10	2.72	2.53
1920.	44.44	42.25	44.52	42.52	52.42	56.14	3.22	4.75	3.28	2.95

Fig iron per gross ton; bars, tank plate, and beams, per 100 pounds. *7 months only. †All muck bar iron to 1892; best refined since.

BESSEMER PIG IRON AT PITTSBURGH, PER GROSS TON.

[Compiled from weekly quotations in The Iron Age.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January...	\$15.90	\$15.09	\$18.15	\$15.00	\$14.59	\$21.58	\$35.95	\$37.25	\$33.60	\$40.40
February...	15.90	14.90	18.15	15.09	14.55	21.26	35.95	37.25	33.60	42.90
March.....	15.90	15.09	18.15	15.09	14.55	21.75	37.70	37.25	32.54	43.40
April.....	15.90	15.15	17.90	14.90	14.55	21.95	42.20	36.15	29.35	43.65
May.....	15.90	15.15	17.74	14.90	14.59	21.95	45.15	36.15	29.35	44.02
June.....	15.90	15.15	17.11	14.90	14.70	21.95	54.70	36.37	29.35	44.80
July.....	15.90	15.15	16.70	14.90	14.95	21.95	57.45	36.60	29.35	47.15
August.....	15.90	15.45	16.52	14.90	15.95	21.95	54.75	36.60	29.35	49.11
September..	15.90	16.15	16.65	14.90	16.85	22.26	48.03	36.60	29.35	50.46
October....	15.44	17.80	16.60	14.85	16.95	24.08	37.25	36.60	29.35	49.21
November..	15.00	18.02	16.02	14.59	17.51	30.05	37.25	36.60	31.26	41.26
December..	15.02	18.15	15.90	14.70	19.65	35.58	37.25	36.60	37.00	36.96
Average..	\$15.71	\$15.94	\$17.13	\$14.89	\$15.78	\$23.86	\$43.64	\$36.67	\$31.12	\$44.44

BASIC PIG IRON AT VALLEY FURNACES, PER GROSS TON.

[Compiled from weekly quotations in The Iron Age.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January...	\$13.25	\$12.35	\$16.41	\$12.50	\$12.50	\$17.81	\$30.00	\$33.00	\$30.00	\$37.75
February...	13.65	12.25	16.30	13.19	12.50	17.69	30.00	33.00	30.00	42.25
March.....	13.75	12.81	16.11	13.00	12.50	18.20	32.25	33.00	28.94	41.60
April.....	13.75	13.00	15.87	13.00	12.50	18.13	38.75	32.00	25.75	42.50
May.....	13.32	13.00	15.15	13.00	12.50	18.00	41.60	32.00	25.75	43.25
June.....	13.05	13.12	14.50	13.00	12.59	18.00	48.75	32.00	25.75	44.00
July.....	13.12	13.40	14.37	13.00	12.91	18.00	52.50	32.00	25.75	45.75
August.....	13.00	13.94	14.06	13.00	13.94	18.00	51.20	32.00	25.75	48.10
September..	12.80	14.37	14.00	13.00	14.75	18.31	42.75	32.00	25.75	48.50
October....	12.52	15.98	13.90	12.81	15.00	19.88	33.00	33.00	25.75	43.75
November..	12.42	16.37	13.09	12.48	15.75	25.10	33.00	33.00	28.31	36.50
December..	12.25	16.50	12.71	12.50	17.50	30.00	33.00	33.00	34.60	33.00
Average..	\$13.07	\$13.92	\$14.71	\$12.87	\$13.74	\$19.76	\$38.90	\$32.50	\$27.67	\$42.25

BASIC PIG IRON AT PHILADELPHIA, PER GROSS TON.

[Compiled from weekly quotations in The Iron Age.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January...	\$14.50	\$14.25	\$18.10	\$14.00	\$13.50	\$19.50	\$30.00	\$33.75	\$33.90	\$39.19
February...	14.44	14.25	18.00	14.13	13.50	19.50	30.50	33.75	33.90	41.90
March.....	15.20	14.37	17.69	14.19	13.50	19.60	33.50	33.75	32.84	44.24
April.....	15.19	14.87	16.75	14.25	13.31	20.63	37.50	32.75	29.65	44.80
May.....	14.75	15.15	16.50	14.06	13.25	20.50	39.70	32.75	29.65	44.80
June.....	14.50	15.25	15.94	14.00	13.55	19.69	45.75	32.79	26.54	44.80
July.....	14.37	15.50	15.20	14.00	13.94	19.13	50.00	32.90	26.12	43.70
August.....	14.65	15.95	15.19	14.00	15.06	19.15	50.00	32.90	26.60	47.21
September..	14.69	16.25	15.12	14.00	16.95	19.75	48.25	32.90	26.88	51.26
October....	14.50	17.43	15.30	14.00	17.00	20.38	33.75	36.60	28.00	49.98
November..	14.50	18.12	15.00	14.00	17.25	25.10	33.75	36.90	30.37	41.94
December..	14.31	18.25	14.81	13.50	18.15	30.00	33.75	36.90	35.80	34.14
Average..	\$14.63	\$15.80	\$16.13	\$14.01	\$14.91	\$21.08	\$38.87	\$34.05	\$30.02	\$44.00

NO. 2 X FOUNDRY PIG IRON AT PHILADELPHIA, PER GROSS TON.
 [Compiled from weekly quotations in The Iron Age.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January...	\$15.50	\$14.85	\$18.50	\$14.72	\$14.25	\$19.94	\$30.10	\$34.25	\$36.15	\$44.35
February..	15.50	14.85	18.25	14.94	14.25	20.00	31.88	34.25	36.15	45.10
March.....	15.50	14.92	17.77	15.00	14.25	20.05	37.31	34.25	34.39	45.63
April.....	15.50	15.00	17.50	15.00	14.25	20.50	41.38	34.25	31.90	47.05
May.....	15.50	15.22	16.80	14.81	14.25	20.50	43.60	34.25	30.70	47.10
June.....	15.25	15.31	16.19	14.75	14.25	19.94	48.19	34.29	29.50	47.15
July.....	15.00	15.69	15.60	14.75	14.31	19.75	53.13	34.40	29.08	48.15
August....	15.00	15.85	15.60	14.75	14.94	19.55	53.00	34.40	29.60	51.96
September.	15.00	16.59	15.84	14.75	16.00	19.50	51.67	34.40	30.70	53.51
October....	15.00	17.60	15.95	14.65	16.25	20.31	34.25	38.85	32.10	52.52
November..	14.95	18.31	15.56	14.50	17.12	24.90	34.25	39.15	35.35	44.99
December..	14.85	18.50	15.25	14.25	19.00	29.25	34.25	39.15	40.70	35.54
Average..	\$15.21	\$16.06	\$16.57	\$14.74	\$15.26	\$21.18	\$41.08	\$35.49	\$33.03	\$46.92

SOUTHERN NO. 2 FOUNDRY IRON AT CINCINNATI, PER GROSS TON.
 [Compiled from weekly quotations in The Iron Age.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January...	\$14.25	\$13.25	\$16.95	\$13.88	\$12.40	\$17.90	\$26.10	\$35.90	\$34.60	\$42.35
February...	14.25	13.31	16.69	13.81	12.40	17.90	27.53	35.90	34.60	43.60
March.....	14.25	13.50	16.31	14.00	12.25	17.90	31.90	35.90	33.54	43.60
April.....	14.25	13.75	15.65	13.75	12.34	17.90	37.40	35.90	30.35	44.10
May.....	13.95	14.15	14.94	13.75	12.40	17.90	41.90	35.90	29.85	45.60
June.....	13.44	14.25	14.06	13.63	12.50	17.34	45.15	36.15	28.39	45.60
July.....	13.25	14.70	13.75	13.30	12.71	16.90	49.90	36.90	28.35	45.60
August....	13.45	15.06	14.06	13.25	13.71	16.70	49.90	36.75	30.41	45.78
September.	13.31	15.87	14.25	13.25	14.15	17.28	49.90	36.60	31.25	46.50
October....	13.25	16.80	14.35	12.90	14.77	18.03	35.90	37.60	31.60	46.50
November..	13.20	17.25	13.87	12.90	16.15	22.40	35.90	37.60	34.35	42.50
December..	13.19	17.25	13.95	12.50	17.10	25.90	35.90	37.60	38.80	42.50
Average..	\$13.67	\$14.93	\$14.90	\$13.41	\$13.57	\$18.67	\$38.95	\$36.56	\$32.17	\$44.52

NO. 2 FOUNDRY PIG IRON AT BIRMINGHAM, PER GROSS TON.
 [Compiled from weekly quotations in The Iron Trade Review.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	*1917.	*1918.	*1919.	*1920.
January...	\$11.00	\$10.00	\$13.70	\$11.00	\$9.50	\$14.50	\$23.00	\$33.50	\$32.25	\$37.69
February...	11.00	10.00	13.50	11.00	9.50	14.63	24.50	33.50	32.25	40.00
March.....	11.00	10.06	13.00	10.75	9.38	15.40	28.00	33.50	31.19	40.40
April.....	11.00	10.50	12.50	10.50	9.35	15.00	35.80	33.50	28.00	40.00
May.....	10.75	10.95	11.75	10.50	9.75	14.95	35.75	33.50	27.38	42.12
June.....	10.25	11.00	10.60	10.31	9.56	14.31	35.75	33.50	25.13	42.30
July.....	10.00	11.25	10.50	10.15	9.60	14.00	46.00	33.50	25.70	42.00
August....	10.05	11.65	11.00	10.00	11.00	13.60	48.00	33.50	26.75	42.00
September.	10.10	12.50	11.00	10.00	11.30	14.50	43.50	33.50	26.75	42.00
October....	10.00	13.45	11.00	10.00	11.75	15.25	33.50	35.25	27.45	42.00
November..	9.75	13.75	10.75	10.00	13.12	19.80	33.50	35.25	30.63	39.50
December..	10.00	13.50	11.00	9.65	14.20	23.13	33.50	35.25	35.00	38.00
Average..	\$10.41	\$11.55	\$11.69	\$10.32	\$10.67	\$15.76	\$35.07	\$33.94	\$29.04	\$40.67

* From November 14, 1917, to July, 1919, silicon content 2.25 to 2.75%, August, 1919, to December, 1920, inclusive, 1.75 to 2.25%.

LOW-PHOSPHORUS PIG IRON AT PHILADELPHIA, PER GROSS TON.
 [Compiled from weekly quotations in The Iron Age.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January...	\$21.75	\$19.19	\$24.50	\$21.00	\$20.00	\$32.00	\$54.20	\$53.00	\$51.18	\$48.00
February...	21.25	19.00	24.50	21.00	20.00	32.00	57.50	53.00	51.45	49.50
March.....	21.35	19.00	24.50	21.00	20.00	32.00	63.00	53.00	49.94	50.00
April.....	21.50	19.44	23.62	21.00	20.00	33.75	71.25	53.00	46.75	50.00
May.....	21.00	19.55	23.50	21.00	20.00	34.00	78.00	53.00	46.75	51.00
June.....	20.60	19.75	23.50	20.62	20.60	33.50	83.25	53.00	40.19	52.40
July.....	20.50	20.00	23.40	20.50	21.37	33.25	90.00	53.00	35.60	54.00
August....	20.00	20.65	23.00	20.75	22.12	34.00	90.00	53.00	36.50	56.40
September..	20.00	21.50	23.00	21.00	24.35	34.25	88.33	53.00	38.00	60.00
October....	20.00	22.60	23.00	20.90	26.25	37.50	53.00	54.00	36.75	60.00
November..	19.55	23.75	22.31	20.12	29.40	44.80	53.00	54.00	39.50	60.00
December..	19.25	24.00	21.75	20.00	31.60	51.00	53.00	53.25	44.60	50.25
Average.	\$20.56	\$20.70	\$23.38	\$20.74	\$22.97	\$36.00	\$69.54	\$53.19	\$43.10	\$53.46

FORGE PIG IRON AT PITTSBURGH, PER GROSS TON.
 [Compiled from weekly quotations in The Iron Age.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January....	\$14.09	\$13.40	\$17.15	\$13.65	\$13.45	\$18.45	\$29.95	\$32.75	\$31.40	\$39.15
February....	14.27	13.40	17.15	13.65	13.45	18.45	31.45	32.75	31.40	42.15
March.....	14.40	13.44	16.92	13.65	13.45	18.45	33.20	32.75	30.34	42.40
April.....	14.40	13.65	16.30	13.65	13.45	18.70	37.95	32.75	27.15	42.40
May.....	14.27	13.82	15.20	13.65	13.45	18.70	40.75	32.75	27.15	43.15
June.....	14.00	13.90	14.71	13.65	13.39	18.70	46.95	32.91	27.15	43.80
July.....	13.90	13.90	14.55	13.65	13.45	18.70	47.70	33.40	27.15	44.40
August....	13.90	14.25	14.25	13.65	14.01	18.70	46.95	33.40	27.15	48.11
September..	13.84	14.65	14.25	13.65	14.65	18.89	46.95	33.40	27.15	50.96
October....	13.65	16.27	14.36	13.55	14.70	20.45	32.75	34.40	27.15	47.46
November..	13.47	16.67	14.25	13.45	15.76	25.95	32.75	34.40	30.71	40.96
December..	13.40	17.15	13.96	13.45	17.85	29.95	32.75	34.40	35.80	36.71
Average.	\$13.97	\$14.54	\$15.25	\$13.61	\$14.25	\$20.34	\$38.34	\$33.34	\$29.14	\$43.47

LAKE SUPERIOR CHARCOAL PIG IRON AT CHICAGO, PER GROSS TON.
 [Compiled from weekly quotations in The Iron Age.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January...	\$17.87	\$16.00	\$18.15	\$15.25	\$15.75	\$19.50	\$31.75	\$37.50	\$38.85	\$48.75
February...	17.50	15.95	18.00	15.25	15.75	19.75	34.75	37.50	38.85	56.25
March.....	17.50	15.75	18.00	15.25	15.75	19.75	37.00	37.50	38.85	57.30
April.....	17.50	15.75	18.00	15.45	15.75	19.75	40.25	37.50	38.85	57.25
May.....	17.25	15.75	18.00	15.75	15.75	19.75	48.15	37.50	38.85	57.50
June.....	16.80	16.25	16.81	15.75	15.75	19.75	52.75	37.59	38.85	57.50
July.....	16.50	16.25	15.65	15.75	15.75	19.75	57.75	37.85	33.17	57.50
August....	16.50	16.25	14.81	15.75	16.00	19.75	58.00	37.85	32.25	57.50
September..	16.50	17.12	14.87	15.75	15.85	19.75	58.00	37.85	32.75	58.50
October....	16.50	18.45	15.25	15.75	15.75	20.25	37.50	38.85	32.75	58.50
November..	16.50	18.62	15.25	15.75	17.00	25.30	37.50	38.85	37.37	54.00
December..	16.37	18.75	15.25	15.75	18.65	31.75	37.50	38.85	43.00	47.25
Average.	\$16.94	\$16.74	\$16.50	\$15.60	\$16.12	\$21.23	\$44.24	\$37.93	\$37.03	\$55.65

BESSEMER STEEL BILLETS AT PITTSBURGH, PER GROSS TON.

[Compiled from weekly quotations in The Iron Age.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January...	\$23.00	\$20.00	\$28.30	\$20.10	\$19.25	\$32.00	\$63.00	\$47.50	\$43.50	\$48.00
February..	23.00	20.00	28.50	21.00	19.50	33.50	65.00	47.50	43.50	55.25
March.....	23.00	19.75	28.50	21.00	19.70	42.40	66.25	47.50	42.25	60.00
April.....	23.00	20.00	28.50	20.80	20.00	45.00	73.75	47.50	38.50	60.00
May.....	23.00	20.80	27.50	20.00	20.00	45.00	86.00	47.50	38.50	60.00
June.....	21.00	20.87	26.50	19.50	20.50	43.50	98.75	47.50	38.50	60.00
July.....	21.00	21.50	26.70	19.00	21.37	41.00	100.00	47.50	38.50	62.50
August....	21.00	22.00	26.00	20.25	23.12	44.20	86.00	47.50	38.50	61.00
September..	20.75	23.62	24.87	21.00	24.10	45.00	66.25	47.50	38.50	58.75
October....	20.00	26.00	23.10	20.20	24.62	46.25	51.50	47.50	38.50	55.00
November..	19.50	27.00	21.00	19.25	26.50	52.00	47.50	47.50	41.37	49.70
December..	19.25	27.00	20.00	19.00	30.60	57.50	47.50	45.50	46.40	43.50
Average.	\$21.46	\$22.38	\$25.79	\$20.09	\$22.44	\$43.95	\$70.96	\$47.33	\$40.54	\$56.14

BESSEMER RAILS AT MILLS IN PENNSYLVANIA, PER GROSS TON.

[Compiled from weekly quotations in The Iron Age.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January...	\$28.00	\$28.00	\$28.00	\$28.00	\$28.00	\$28.00	\$38.00	\$55.00	\$55.00	\$45.00
February...	28.00	28.00	28.00	28.00	28.00	28.00	38.00	55.00	55.00	45.00
March.....	28.00	28.00	28.00	28.00	28.00	28.00	38.00	55.00	52.50	49.00
April.....	28.00	28.00	28.00	28.30	28.00	28.00	38.00	55.00	45.00	55.00
May.....	28.00	28.00	28.00	28.00	28.00	33.00	38.00	55.00	45.00	55.00
June.....	28.00	28.00	28.00	28.00	28.00	33.00	38.00	55.00	45.00	55.00
July.....	28.00	28.00	28.00	28.00	28.00	33.00	38.00	55.00	45.00	55.00
August....	28.00	28.00	28.00	28.00	28.00	33.00	38.00	55.00	45.00	55.00
September..	28.00	28.00	28.00	28.00	28.00	33.00	38.00	55.00	45.00	55.00
October....	28.00	28.00	28.00	28.00	28.00	33.00	38.00	55.00	45.00	55.00
November..	28.00	28.00	28.00	28.00	28.00	36.00	38.00	55.00	45.00	55.00
December..	28.00	28.00	28.00	28.00	28.00	38.00	38.00	55.00	45.00	50.00
Average.	\$28.00	\$28.00	\$28.00	\$28.00	\$28.00	\$32.00	\$38.00	\$55.00	\$47.29	\$52.42

BEAMS AND CHANNELS AT PITTSBURGH, PER 100 LBS.

[Furnished by a manufacturer in Western Pennsylvania.]

Years.	First quarter.	Second quarter.	Third quarter.	Fourth quarter.	Average.	Years.	First quarter.	Second quarter.	Third quarter.	Fourth quarter.	Average.
1901.....	\$1.51	\$1.60	\$1.60	\$1.60	\$1.58	1911.....	\$1.40	\$1.38	\$1.30	\$1.16	\$1.31
1902.....	1.60	1.60	1.60	1.60	1.60	1912.....	1.15	1.24	1.34	1.45	1.29
1903.....	1.60	1.60	1.60	1.60	1.60	1913.....	1.45	1.45	1.39	1.27	1.39
1904.....	1.60	1.60	1.55	1.41	1.54	1914.....	1.19	1.13	1.17	1.12	1.15
1905.....	1.55	1.60	1.63	1.70	1.62	1915.....	1.12	1.22	1.32	1.61	1.32
1906.....	1.70	1.70	1.70	1.70	1.70	1916.....	2.03	2.49	2.57	2.87	2.49
1907.....	1.70	1.70	1.70	1.70	1.70	1917.....	3.30	3.91	3.93	3.00	3.53
1908.....	1.70	1.68	1.60	1.60	1.64	1918.....	3.00	3.00	3.00	3.00	3.00
1909.....	1.45	1.25	1.40	1.53	1.41	1919.....	2.76	2.45	2.45	2.45	2.53
1910.....	1.55	1.53	1.41	1.40	1.47	1920.....	2.45	2.45	2.45	2.45	2.45

STEEL WIRE RODS AT PITTSBURGH, PER GROSS TON.

[Compiled from weekly quotations in The Iron Age.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January . .	\$28.00	\$24.37	\$30.00	\$25.50	\$25.00	\$43.00	\$74.00	\$57.00	\$57.00	\$60.00
February . .	28.75	25.00	30.00	26.38	25.00	48.00	77.50	57.00	57.00	63.75
March	29.00	25.00	30.00	26.50	25.00	54.80	82.50	57.00	55.75	70.00
April	29.00	25.00	30.00	26.00	25.00	60.00	85.00	57.00	52.00	70.00
May	29.00	25.00	30.00	25.50	25.00	60.00	86.00	57.00	52.00	72.50
June	28.25	25.00	29.50	24.50	25.00	53.75	93.75	57.00	52.00	75.00
July	27.00	25.00	28.30	24.50	25.62	53.75	95.00	57.00	52.00	75.00
August	27.00	25.80	28.00	25.00	27.00	55.00	92.00	57.00	52.00	75.00
September . .	27.00	27.00	27.37	26.20	29.40	55.00	88.75	57.00	52.00	75.00
October	26.00	28.50	26.60	25.88	31.75	55.00	68.20	57.00	52.00	75.00
November . . .	25.30	29.75	25.87	25.25	36.25	63.00	57.00	57.00	54.50	66.40
December . . .	24.50	30.00	25.17	25.00	39.60	68.75	57.00	57.00	59.60	57.00
Average . . .	\$27.40	\$26.28	\$28.40	\$25.52	\$28.30	\$55.84	\$79.72	\$57.00	\$53.99	\$69.55

STEEL SHIP PLATES AT PITTSBURGH, PER GROSS TON.

[Furnished by a manufacturer in Western Pennsylvania.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January . . .	\$31.36	\$25.85	\$32.48	\$26.88	\$24.64	\$42.76	\$81.54	\$72.80	\$67.20	\$59.36
February . . .	31.36	25.33	32.48	26.88	24.64	49.12	84.00	72.80	67.20	59.36
March	31.36	26.23	32.48	26.43	25.20	57.25	96.99	72.80	64.42	59.36
April	31.36	27.22	32.48	25.76	26.32	63.06	100.80	72.80	59.36	59.36
May	31.36	28.00	32.48	25.54	26.32	64.96	100.80	72.80	59.36	59.36
June	30.24	28.22	32.48	24.86	27.44	64.96	100.80	72.80	59.36	59.36
July	29.57	29.14	32.48	25.09	28.67	64.96	100.80	72.80	59.36	59.36
August	29.12	30.24	32.48	26.66	29.70	66.91	100.80	72.80	59.36	59.36
September . .	28.54	30.91	30.24	26.88	30.49	67.20	95.20	72.80	59.36	59.36
October	25.70	32.26	29.79	26.43	32.23	67.56	72.80	72.80	59.36	59.36
November . . .	24.47	32.48	27.55	24.86	36.64	74.84	72.80	72.80	59.36	59.36
December . . .	26.57	32.48	26.88	23.74	39.38	79.25	72.80	72.80	59.36	59.36
Average . . .	\$29.25	\$29.03	\$31.19	\$25.83	\$29.31	\$63.57	\$90.01	\$72.80	\$61.09	\$59.36

SOFT STEEL BARS AT PITTSBURGH, PER 100 LBS.

[Compiled from weekly quotations in The Iron Age.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January . . .	\$1.40	\$1.15	\$1.70	\$1.20	\$1.10	\$2.03	\$3.15	\$2.90	\$2.70	\$2.75
February . . .	1.40	1.12	1.70	1.20	1.10	2.31	3.25	2.90	2.70	3.00
March	1.40	1.10	1.85	1.20	1.15	2.65	3.63	2.90	2.61	3.65
April	1.40	1.16	1.84	1.15	1.20	2.88	3.75	2.90	2.35	3.75
May	1.37	1.20	1.70	1.14	1.20	3.00	4.00	2.90	2.35	3.62
June	1.25	1.20	1.60	1.11	1.21	2.75	4.38	2.90	2.35	3.50
July	1.23	1.25	1.50	1.12	1.25	2.63	4.50	2.90	2.35	3.50
August	1.20	1.30	1.40	1.19	1.30	2.56	4.30	2.90	2.35	3.25
September . .	1.19	1.37	1.40	1.20	1.34	2.60	4.00	2.90	2.35	3.25
October	1.12	1.45	1.39	1.15	1.44	2.75	2.90	2.90	2.39	3.12
November . . .	1.08	1.55	1.29	1.10	1.62	2.83	2.90	2.90	2.69	2.87
December . . .	1.12	1.60	1.21	1.07	1.84	3.00	2.90	2.80	2.75	2.35
Average . . .	\$1.26	\$1.29	\$1.55	\$1.15	\$1.31	\$2.67	\$3.64	\$2.89	\$2.49	\$3.22

BEST REFINED BAR IRON AT PITTSBURGH, PER 100 LBS.

[Furnished by a manufacturer in Western Pennsylvania.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January ...	\$1.50	\$1.35	\$1.75	\$1.40	\$1.35	\$1.80	\$2.75	\$4.00	\$4.50	\$3.75
February ..	1.50	1.35	1.75	1.35	1.40	1.90	2.90	4.25	4.50	4.10
March.....	1.45	1.35	1.75	1.35	1.45	1.92	2.90	4.50	4.50	4.25
April.....	1.45	1.35	1.75	1.35	1.40	2.00	3.25	4.25	4.50	4.20
May.....	1.40	1.35	1.75	1.30	1.40	2.00	3.50	4.50	4.25	4.50
June.....	1.40	1.35	1.75	1.30	1.45	2.10	3.90	4.25	4.25	4.75
July.....	1.40	1.40	1.75	1.30	1.50	2.20	4.25	4.00	4.25	5.00
August....	1.40	1.40	1.70	1.30	1.50	2.20	4.50	4.25	4.00	5.25
September..	1.35	1.45	1.70	1.30	1.55	2.25	4.50	4.25	3.75	5.25
October....	1.35	1.50	1.70	1.30	1.55	2.25	4.50	4.50	3.50	5.50
November..	1.35	1.65	1.50	1.35	1.60	2.50	4.50	4.50	3.50	5.25
December..	1.35	1.75	1.40	1.30	1.60	2.50	4.50	4.50	3.75	5.25
Average.	\$1.41	\$1.44	\$1.69	\$1.32	\$1.48	\$2.13	\$3.83	\$4.31	\$4.10	\$4.75

REFINED BAR IRON FROM STORE, PHILADELPHIA, PER 100 LBS.

[Furnished by Harrison I. Potts, Secretary, Iron Merchants' Assn., Philadelphia.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January ...	\$1.67	\$1.62	\$2.06	\$1.66	\$1.52	\$2.70	\$3.92	\$4.41	\$5.00	\$3.81
February ..	1.67	1.62	2.06	1.66	1.52	2.84	3.92	4.41	4.85	4.21
March.....	1.67	1.62	2.06	1.66	1.52	3.07	4.21	4.41	3.51	4.68
April.....	1.67	1.62	1.96	1.57	1.55	3.19	4.41	4.41	3.32	4.95
May.....	1.69	1.64	1.96	1.57	1.57	3.19	4.41	4.41	3.32	4.95
June.....	1.62	1.67	1.96	1.57	1.58	3.19	4.56	4.41	3.32	4.95
July.....	1.62	1.71	1.96	1.57	1.62	3.19	5.10	4.64	3.32	4.95
August....	1.62	1.71	1.96	1.66	1.73	3.33	5.10	4.64	3.56	4.95
September..	1.62	1.81	1.86	1.66	1.89	3.33	5.10	4.64	3.56	4.95
October....	1.62	1.96	1.76	1.52	1.97	3.53	5.10	4.68	3.56	5.20
November..	1.62	1.96	1.76	1.52	2.14	3.72	4.75	4.74	3.56	4.95
December..	1.62	2.06	1.66	1.52	2.33	3.92	4.41	4.74	3.56	4.55
Average.	\$1.64	\$1.75	\$1.92	\$1.59	\$1.74	\$3.27	\$4.58	\$4.54	\$3.70	\$4.76

TINPLATES AT PITTSBURGH, PER BASE BOX.

[Compiled from weekly quotations in The Iron Age.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January ...	\$3.60	\$3.40	\$3.60	\$3.32	\$3.10	\$3.75	\$7.00	\$7.75	\$7.35	\$7.00
February ..	3.67	3.35	3.60	3.29	3.10	3.94	7.37	7.75	7.35	7.00
March.....	3.70	3.30	3.60	3.30	3.25	4.15	8.00	7.75	7.26	7.00
April.....	3.70	3.30	3.60	3.30	3.25	4.50	8.00	7.75	7.00	7.00
May.....	3.70	3.33	3.60	3.30	3.15	5.30	8.40	7.75	7.00	7.00
June.....	3.70	3.40	3.60	3.30	3.11	5.81	10.50	7.75	7.00	7.00
July.....	3.70	3.43	3.60	3.27	3.10	6.00	12.00	7.75	7.00	7.50
August....	3.70	3.50	3.55	3.41	3.10	5.95	11.40	7.75	7.00	9.00
September..	3.67	3.58	3.50	3.35	3.15	5.75	12.00	7.75	7.00	9.00
October....	3.52	3.60	3.50	3.24	3.15	5.81	.....	7.75	7.00	8.62
November..	3.40	3.60	3.40	3.15	3.28	5.95	7.75	7.75	7.00	7.50
December..	3.40	3.60	3.40	3.13	3.52	6.63	7.75	7.55	7.00	7.00
Average.	\$3.62	\$3.45	\$3.55	\$3.28	\$3.19	\$5.29	\$9.11	\$7.73	\$7.08	\$7.55

CUT NAILS AT PHILADELPHIA, PER 100-LB. KEG.

[Furnished by Edward L. Hand & Co., Philadelphia.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January . .	\$2.00	\$1.90	\$2.00	\$1.90	\$1.90	\$2.20	\$3.80	\$5.00	\$5.75	\$7.00
February . .	2.05	1.90	2.00	1.90	1.90	2.40	4.00	5.00	5.75	7.50
March	2.05	1.90	2.00	1.90	1.90	2.80	4.00	5.00	5.75	7.50
April	2.05	1.90	2.00	1.90	1.90	2.80	4.25	5.00	5.25	7.50
May	2.05	1.90	2.00	1.90	1.90	2.90	4.50	5.00	5.25	7.50
June	2.05	1.90	2.00	1.90	1.90	3.00	4.50	5.00	5.50	7.50
July	2.05	1.90	2.05	1.90	1.90	3.00	4.75	5.00	5.50	7.50
August	2.00	1.90	2.00	1.90	1.90	3.00	4.75	5.00	5.50	7.50
September . .	2.00	1.95	2.00	1.90	1.95	3.00	4.75	5.00	5.75	7.50
October	2.00	1.95	2.00	1.90	1.95	3.10	4.75	5.75	5.75	7.50
November . .	1.95	1.95	1.95	1.90	2.00	3.50	5.00	5.75	6.00	7.00
December . .	1.95	2.00	1.90	1.90	2.20	3.80	5.00	5.75	6.50	6.00
Average . .	\$2.02	\$1.92	\$1.99	\$1.90	\$1.94	\$2.96	\$4.50	\$5.19	\$5.69	\$7.29

WIRE NAILS AT PITTSBURGH, PER 100-LB. KEG.

[Compiled from weekly quotations in The Iron Age.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January . .	\$1.71	\$1.57	\$1.75	\$1.54	\$1.54	\$2.13	\$3.00	\$3.50	\$3.50	\$4.50
February . .	1.75	1.60	1.75	1.60	1.57	2.25	3.00	3.50	3.50	4.50
March	1.79	1.60	1.76	1.60	1.60	2.40	3.20	3.50	3.44	4.00
April	1.80	1.60	1.80	1.60	1.56	2.40	3.28	3.50	3.25	4.00
May	1.80	1.60	1.80	1.56	1.55	2.50	3.50	3.50	3.25	4.00
June	1.75	1.60	1.80	1.50	1.55	2.50	3.75	3.50	3.25	4.00
July	1.70	1.62	1.70	1.52	1.60	2.50	4.00	3.50	3.25	4.00
August	1.69	1.66	1.65	1.56	1.61	2.58	4.00	3.50	3.25	4.25
September . .	1.65	1.70	1.65	1.60	1.69	2.60	4.00	3.50	3.25	4.25
October	1.64	1.70	1.63	1.60	1.80	2.65	4.00	3.50	3.31	4.25
November . .	1.55	1.70	1.59	1.50	1.87	2.85	3.50	3.50	3.50	4.05
December . .	1.53	1.72	1.55	1.51	2.04	3.00	3.50	3.50	4.20	3.25
Average . .	\$1.70	\$1.64	\$1.70	\$1.56	\$1.66	\$2.53	\$3.56	\$3.50	\$3.41	\$4.09

WIRE NAILS AT CHICAGO, PER 100-LB. KEG.

[Compiled from weekly quotations in The Iron Age.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January . .	\$1.89	\$1.74	\$1.93	\$1.71	\$1.71	\$2.31	\$3.19	\$3.71	\$3.77	\$4.77
February . .	1.93	1.78	1.93	1.78	1.78	2.44	3.19	3.71	3.77	4.77
March	1.97	1.78	1.93	1.78	1.79	2.57	3.39	3.71	3.71	4.27
April	1.98	1.78	1.98	1.78	1.79	2.59	3.46	3.71	3.52	4.27
May	1.98	1.78	1.98	1.75	1.74	2.69	3.69	3.71	3.52	4.27
June	1.94	1.78	1.98	1.70	1.74	2.69	3.94	3.72	3.52	4.27
July	1.88	1.78	1.98	1.70	1.76	2.69	4.19	3.77	3.52	4.27
August	1.88	1.84	1.86	1.74	1.76	2.77	4.19	3.77	3.52	4.54
September . .	1.88	1.88	1.83	1.78	1.88	2.79	4.19	3.77	3.52	4.63
October	1.87	1.88	1.82	1.78	1.96	2.81	4.21	3.77	3.58	4.63
November . .	1.80	1.88	1.77	1.77	2.06	3.04	3.71	3.77	3.77	4.43
December . .	1.73	1.90	1.73	1.74	2.21	3.19	3.71	3.77	4.47	3.63
Average . .	\$1.89	\$1.82	\$1.89	\$1.75	\$1.85	\$2.72	\$3.75	\$3.74	\$3.68	\$4.40

DOMESTIC PRICES OF LAKE SUPERIOR IRON ORE
AND CONNELLSVILLE COKE.PRICES OF LAKE SUPERIOR IRON ORE AND DATE OF IRON
ORE BUYING MOVEMENT, 1889-1921.

[From The Iron Trade Review.]

Season.	Date of buying movement.	Old range Bessemer.	Old range non- Bessemer.	Mesabi Bessemer.	Mesabi non- Bessemer.
1890	December 15, 1889.	\$5.50	\$5.25	No sale	No sale
1891	June 1, 1891.	4.50	4.25	No sale	No sale
1892	January 31, 1892.	4.50	3.65	No sale	No sale
1893	March 15, 1893.	3.85	3.20	\$3.00	No sale
1894	March 1, 1894.	2.75	2.50	2.35	No sale
1895	April 1, 1895.	2.90	2.25	2.19	\$1.95
1896	May 1, 1896.	4.00	2.70	3.50	2.25
1897	May 20, 1897.	2.60	2.15	2.25	1.90
1898	March 20, 1898.	2.75	1.85	2.25	1.75
1899	February 1, 1899.	3.00	2.15	2.40	2.00
1900	December 15, 1899.	5.50	4.25	4.50	4.00
1901	April 15, 1901.	4.25	3.00	3.25	2.75
1902	February 1, 1902.	4.25	3.25	3.25	2.75
1903	March 20, 1903.	4.50	3.60	4.00	3.20
1904	April 15, 1904.	3.25	2.75	3.00	2.50
1905	February 1, 1905.	3.75	3.20	3.50	3.00
1906	December 5, 1905.	4.25	3.70	4.00	3.50
1907	November 5, 1906.	5.00	4.20	4.75	4.00
1908	June 15, 1908.	4.50	3.70	4.25	3.50
1909	May 10, 1909.	4.50	3.70	4.25	3.50
1910	December 24, 1909.	5.00	4.20	4.75	4.00
1911	April 21, 1911.	4.50	3.70	4.25	3.50
1912	March 20, 1912.	3.75	3.00	3.50	2.85
1913	November 19, 1912.	4.40	3.60	4.15	3.40
1914	May 1, 1914.	3.75	3.00	3.50	2.85
1915	April 19, 1915.	3.75	3.00	3.45	2.80
1916	December 7, 1915.	4.45	3.70	4.20	3.55
1917	November 22, 1916.	5.95	5.20	5.70	5.05
*1918	{ April 1, 1918.	5.95	5.20	5.70	5.05
	{ July 1, 1918.	6.40	5.65	6.15	5.50
	{ October 1, 1918.	6.65	5.90	6.40	5.75
1919	April 28, 1919.	6.45	5.70	6.20	5.55
1920	February 2, 1920.	7.45	6.70	7.20	6.55
1921	June 16, 1921.	6.45	5.70	6.20	5.55

* Prices for 1918 are the Government maximum prices.

The above classification of iron ores conforms to that adopted by the Lake Superior Iron Ore Association. Since 1907 the base for Bessemer iron ores is a hypothetical ore containing 55 per cent. of metallic iron in the natural state, 0.045 per cent. of phosphorus, and 10 per cent. of moisture. The base for the non-Bessemer ores is an ore containing 51.50 per cent. of natural iron and 12 per cent. of moisture.

AVERAGE PRICES OF CONNELLSVILLE COKE, 1911-1920.

The following table gives the average monthly prices per net ton of 2,000 pounds of prompt Connellsville furnace and foundry coke at ovens in the last ten years. The prices for furnace coke were compiled by *The Connellsville Courier*; for foundry coke they have been compiled from weekly quotations in *The Iron Age*.

CONNELLSVILLE FURNACE COKE AT OVENS, PER NET TON.

[Compiled from quotations in *The Connellsville Courier*.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January ...	\$1.40	\$1.88	\$3.85	\$1.88	\$1.55	\$3.14	\$9.44	\$6.00	\$5.84	\$7.00
February ..	1.47	1.84	2.60	1.90	1.55	3.41	10.57	6.00	4.72	7.00
March	1.57	2.04	2.47	1.92	1.53	3.45	9.58	6.00	4.05	7.00
April	1.58	2.53	2.20	1.90	1.55	2.45	8.00	6.00	3.71	13.10
May.....	1.50	2.32	2.15	1.83	1.50	2.34	8.40	6.00	3.80	14.00
June.....	1.45	2.21	2.20	1.80	1.50	2.54	11.20	6.00	3.92	16.00
July.....	1.45	2.34	2.50	1.75	1.67	2.65	12.32	6.00	4.06	19.00
August	1.53	2.25	2.50	1.74	1.54	2.75	13.42	6.00	4.32	19.15
September .	1.50	2.42	2.37	1.70	1.66	2.94	11.85	6.00	4.42	18.25
October....	1.50	3.46	2.10	1.65	2.18	5.69	6.00	6.00	4.60	17.25
November..	1.50	3.95	1.88	1.60	2.35	6.91	6.00	6.00	6.05	10.60
December..	1.68	4.00	1.80	1.60	2.85	9.00	6.00	6.00	6.81	7.75
Average.	\$1.51	\$2.60	\$2.38	\$1.77	\$1.79	\$3.94	\$9.40	\$6.00	\$4.69	\$13.01

CONNELLSVILLE FOUNDRY COKE AT OVENS, PER NET TON.

[Compiled from quotations in *The Iron Age*.]

Months.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
January ...	\$2.00	\$1.97	\$4.35	\$2.50	\$2.00	\$3.50	\$10.00	\$7.00	\$6.25	\$7.00
February ..	2.10	2.06	3.25	2.50	2.00	3.50	11.75	7.00	5.00	7.00
March	2.15	2.41	3.00	2.47	2.00	3.75	10.87	7.00	4.94	7.00
April	2.10	2.71	3.00	2.41	2.00	3.56	9.38	7.00	4.30	11.00
May.....	2.00	2.58	2.87	2.40	2.00	3.15	8.90	7.00	4.31	13.00
June.....	1.95	2.42	2.75	2.33	2.00	3.25	12.12	7.00	4.56	16.00
July.....	1.90	2.40	2.75	2.27	2.00	3.25	13.00	7.00	5.00	18.00
August	1.90	2.40	2.90	2.21	2.00	3.30	13.50	7.00	5.25	18.70
September .	1.85	2.57	2.90	2.09	2.09	3.31	14.00	7.00	5.80	17.62
October....	1.85	3.45	2.80	2.00	2.35	3.88	6.00	7.00	6.25	16.37
November .	1.90	4.06	2.60	1.92	2.87	7.10	6.75	7.00	7.00	9.30
December..	1.95	4.44	2.50	1.94	2.95	8.63	7.00	7.00	7.00	6.87
Average.	\$1.97	\$2.79	\$2.97	\$2.25	\$2.19	\$4.18	\$10.27	\$7.00	\$5.47	\$12.32

ENGLISH PRICES OF PIG IRON AND RAILS.

PRICES OF BESSEMER PIG IRON IN THE NORTHWEST OF ENGLAND,
PER GROSS TON.

[Compiled from quotations in the Iron and Coal Trades Review. Converted into American currency at the par rate of exchange—\$4.866.]

Months.	1911.	1912.	1913.	1914.	1915.	*1916.	*1917.	*1918.	*1919.	1920.
January....	\$16.60	\$16.28	\$21.02	\$15.67	\$20.35	\$32.03	\$31.02	\$31.02	\$31.02	\$54.68
February...	16.58	16.28	20.99	15.88	22.20	31.02	31.02	31.02	31.02	57.18
March.....	16.26	16.28	20.83	15.91	23.26	31.02	31.02	31.02	31.02	59.61
April.....	15.99	16.83	20.65	15.73	26.03	31.02	31.02	31.02	31.02	66.91
May.....	15.81	17.45	20.30	15.60	25.70	31.02	31.02	31.02	43.91	70.56
June.....	15.57	17.68	19.65	15.55	25.54	31.02	31.02	31.02	44.83	71.77
July.....	15.33	18.62	18.88	15.55	26.27	31.02	31.02	31.02	47.53	71.77
August....	15.43	19.05	18.13	17.15	25.91	31.02	31.02	31.02	49.75	71.77
September..	15.57	19.93	17.52	18.12	25.85	31.02	31.02	31.02	49.75	71.77
October....	15.39	20.65	17.11	17.25	26.47	31.02	31.02	31.02	49.75	71.77
November..	15.20	20.73	16.46	15.88	30.53	31.02	31.02	31.02	49.75	71.77
December..	15.75	21.02	15.64	16.96	32.21	31.02	31.02	31.02	49.75	68.12
Average..	\$15.79	\$18.40	\$18.93	\$16.27	\$25.86	\$31.10	\$31.02	\$31.02	\$42.42	\$67.31

*Control prices to home consumers from March 31, 1916, to April 30, 1919, inclusive.

AVERAGE PRICES OF NO. 3 CLEVELAND PIG IRON, PER GROSS TON.

[Compiled from quotations in the Iron and Coal Trades Review. Converted into American currency at the par rate of exchange—\$4.866.]

Months.	1911.	1912.	1913.	1914.	1915.	*1916.	*1917.	*1918.	*1919.	1920.
January....	\$12.14	\$12.16	\$16.27	\$12.38	\$13.56	\$19.52	\$21.29	\$23.11	\$23.11	\$42.58
February...	11.96	12.00	15.48	12.51	13.78	22.50	21.29	23.11	23.11	42.58
March.....	11.78	12.39	15.72	12.41	14.72	20.07	21.29	23.11	23.11	48.05
April.....	11.43	12.95	16.32	12.50	16.21	20.07	22.50	23.11	23.11	48.66
May.....	11.29	13.21	16.10	12.51	15.85	20.07	22.50	23.11	37.10	50.61
June.....	11.33	13.33	13.80	12.51	16.26	20.07	22.50	23.11	38.93	52.92
July.....	11.41	13.99	13.67	12.49	16.40	21.29	22.50	23.11	38.93	52.92
August....	11.51	14.83	13.54	12.70	16.08	21.29	22.50	23.11	38.93	53.77
September..	11.43	16.13	13.44	12.49	15.83	21.29	23.11	23.11	38.93	54.74
October....	11.35	16.20	12.89	12.21	16.09	21.29	23.11	23.11	38.93	54.74
November..	11.57	16.38	12.05	12.15	17.05	21.29	23.11	23.11	38.93	54.74
December..	12.08	16.42	12.21	12.89	18.51	21.29	23.11	23.11	38.93	54.74
Average..	\$11.61	\$14.17	\$12.48	\$15.86	\$20.84	\$22.40	\$23.11	\$33.50	\$50.92	

*Control prices to home consumers from March 31, 1916, to April 30, 1919, inclusive

PRICES OF STEEL RAILS AT MILLS IN ENGLAND.

[Compiled from weekly quotations in the Iron and Coal Trades Review. Converted into American currency at the par rate of exchange—\$4.866.]

Months.	1911.	1912.	1913.	1914.	1915.	*1916.	*1917.	*1918.	*1919.	1920.
January....	\$27.21	\$27.52	\$32.84	\$31.63	\$31.75	\$53.22	\$52.92	\$52.92	\$52.92	\$91.24
February..	27.97	27.97	32.84	31.63	33.45	53.53	52.92	52.92	65.08	93.67
March.....	27.97	27.97	32.84	31.16	35.28	53.53	52.92	52.92	65.08	99.14
April.....	27.97	28.12	32.39	30.41	37.10	53.07	52.92	52.92	65.08	107.05
May.....	27.67	29.56	32.23	29.95	37.10	52.92	52.92	52.92	72.99	111.92
June.....	27.37	30.71	32.23	29.80	38.31	52.92	52.92	52.92	75.42	111.92
July.....	27.37	31.02	32.23	28.58	43.18	52.92	52.92	52.92	77.86	116.78
August....	27.37	31.14	32.23	30.25	44.40	52.92	52.92	52.92	80.29	121.65
September..	27.37	31.78	32.07	32.84	44.40	52.92	52.92	52.92	80.29	121.65
October....	27.37	32.23	31.63	31.99	44.40	52.92	52.92	52.92	80.29	121.65
November..	27.37	32.23	31.63	31.02	45.62	52.92	52.92	52.92	80.29	121.65
December..	27.37	32.53	31.63	31.02	51.21	52.92	52.92	52.92	83.94	121.65
Average..	\$27.53	\$30.23	\$32.23	\$30.86	\$40.52	\$53.06	\$52.92	\$52.92	\$73.29	\$111.66

* Control prices to home consumers from April 21, 1916, to April 30, 1919, inclusive.

STATISTICS FOR CANADA.

PIG IRON.

PRODUCTION OF PIG IRON BY GRADES, GROSS TONS, 1905-1920.

Years.	Basic.	Bessemer.*	Foundry.†	All other.	Total.
1905.....	172,102	149,203	139,528	7,170	468,003
1906.....	246,228	165,609	124,361	5,759	541,957
1907.....	341,257	154,910	78,901	6,078	581,146
1908.....	335,410	112,811	109,471	5,980	563,672
1909.....	357,965	169,545	108,608	40,972	677,090
1910.....	365,090	221,494	143,986	9,640	740,210
1911.....	413,303	186,274	190,324	34,467	824,368
1912.....	489,799	228,742	194,208	129	912,878
1913.....	558,524	227,662	225,231	3,701	1,015,118
1914.....	331,456	184,053	174,346	16,117	705,972
1915.....	660,369	13,714	125,769	25,568	825,420
1916.....	851,453	12,575	181,748	23,765	1,069,541
1917.....	861,728	13,968	168,964	41,321	1,085,981
1918.....	857,839	41,474	150,158	57,093	1,106,564
1919.....	515,359	6,795	257,315	83,397	862,866
1920.....	657,757	3,410	273,938	63,709	998,814

*Includes low-phosphorus.

†Includes ferro-silicon.

PRODUCTION OF PIG IRON BY GRADES, 1919-1920, SHOWING INCREASE OR DECREASE BY GRADES, GROSS TONS.

Grades.	1919.	Per cent.	1920.	Per cent.	Increase.	Per cent.
Basic.....	515,359	59.73	657,757	65.85	142,398	27.63
Bessemer.....	6,795	.79	3,410	.34	*3,385	*49.82
Foundry.....	257,315	29.82	273,938	27.43	16,623	6.46
All other.....	83,397	9.66	63,709	6.38	*19,688	*23.61
Total.....	862,866	100.00	998,814	100.00	135,948	15.76

*Decrease.

PRODUCTION OF PIG IRON BY FUELS, GROSS TONS, 1901-1920.

Years.	Coke.	Char-coal.*	Total.	Years.	Coke.	Char-coal.*	Total.
1901..	228,893	16,083	244,976	1911..	799,716	24,652	824,368
1902..	302,712	16,845	319,557	1912..	886,506	26,372	912,878
1903..	247,905	17,513	265,418	1913..	986,848	28,270	1,015,118
1904..	251,671	19,271	270,942	1914..	690,880	15,092	705,972
1905..	432,870	35,133	468,003	1915..	803,646	21,774	825,420
1906..	525,716	16,241	541,957	1916..	1,028,530	41,011	1,069,541
1907..	572,025	9,121	581,146	1917..	1,030,517	55,464	1,085,981
1908..	556,671	7,001	563,672	1918..	1,042,425	64,139	1,106,564
1909..	660,856	16,234	677,090	1919..	837,303	25,563	862,866
1910..	724,174	16,036	740,210	1920..	970,586	28,228	998,814

* Includes pig iron made with charcoal and coke, electricity and coke, etc.

PIG IRON MADE FOR SALE OR USE OF MAKERS, 1920.

Grades.	For sale.	Own use.	Total.
Foundry and ferro-silicon.....	*270,360	3,578	273,938
Other grades.....	87,554	637,322	724,876
Total.....Gross tons.	357,914	640,900	998,814

* Sand cast, 125,959 tons; machine cast, 143,492 tons; chill cast, 909 tons.

METHODS BY WHICH ALL PIG IRON WAS CAST OR DELIVERED.

Years.	Molten condition.	Sand cast.	Machine cast.	Chill cast.	Direct castings.	Total. Gross tons.
1914.....	449,713	188,135	68,106	.....	18	705,972
1915.....	598,221	180,770	46,410	.....	19	825,420
1916.....	758,912	213,796	96,741	19	73	1,069,541
1917.....	804,725	216,097	62,885	2,039	235	1,085,981
1918.....	799,312	234,096	65,472	7,666	18	1,106,564
1919.....	456,603	244,655	158,172	3,374	62	862,866
1920.....	582,057	187,692	228,139	909	17	998,814

RAW MATERIALS CONSUMED IN BLAST FURNACES, 1912-1920.

Years	Total consumption of —				Consumption per ton of iron made.			
	Ore, cinder, etc. Gross tons.	Lime-stone. Gross tons.	Coke. Net tons.	Charcoal. Bushels.	Ore, cinder, etc. Pounds.	Lime-stone. Pounds.	Coke. Pounds.	Charcoal. Bushels.
1912.	1,915,165	666,214	1,275,349	1,886,748	4,699.4	1,634.7	2,854.6	97.3
1913.	2,045,780	705,483	1,413,111	2,206,191	4,514.3	1,556.7	2,843.3	104.2
1914.	1,358,184	419,864	910,887	883,625	4,309.4	1,332.2	2,611.4	105.5
1915.	1,609,032	512,379	1,070,437	1,314,357	4,366.5	1,390.5	2,632.4	108.3
1916.	1,985,581	630,796	1,342,405	1,843,209	4,260.3	1,353.5	2,610.3	119.3
1917.	2,009,812	721,726	1,358,619	1,288,390	4,321.1	1,551.7	2,636.8	113.8
1918.	2,060,063	674,855	1,429,855	.....	4,426.7	1,450.1	2,743.3	.....
1919.	1,691,506	532,479	1,108,353	177,795	4,520.0	1,422.8	2,647.4	185.5
1920.	1,942,994	570,282	1,209,094	.....	4,484.2	1,316.1	2,491.5	.....

ANNUAL CAPACITY OF BLAST FURNACES, DECEMBER 31, 1920.

Provinces.	Coke.		Charcoal.		Total.	
	No. stacks.	Gross tons.	No. stacks.	Gross tons.	No. stacks.	Gross tons.
Ontario.....	10	1,002,500	1	20,000	11	1,022,500
Nova Scotia.....	8	656,500	0	0	8	656,500
Total.....	18	1,659,000	1	20,000	19	1,679,000

On December 31, 1920, 6 furnaces were in blast, 13 were idle, and 2 were being built. Twelve furnaces were active during the year and 7 idle throughout the year. One furnace was dismantled in 1920.

STEEL INGOTS AND CASTINGS.

PRODUCTION OF ALL KINDS OF STEEL INGOTS AND CASTINGS.

Years.	Gross tons.	Years.	Gross tons.	Years.	Gross tons.
1894	25,685	1903.....	181,514	1912.....	853,031
1895	17,000	1904.....	148,784	1913.....	1,042,503
1896	16,000	1905.....	403,449	1914.....	743,352
1897	18,400	1906.....	570,889	1915.....	912,755
1898	21,540	1907.....	646,754	1916.....	1,286,509
1899	22,000	1908.....	509,957	1917.....	1,562,289
1900	23,577	1909.....	678,751	1918.....	1,694,977
1901	26,084	1910.....	741,924	1919.....	927,641
1902	182,037	1911.....	790,871	1920.....	1,109,922

Statistics for years prior to 1894 are not available.

PRODUCTION OF STEEL INGOTS AND CASTINGS, 1904-1920.

Years.	Ingots.	Castings.	Total.	Years.	Ingots.	Castings.	Total.
1904....	142,279	6,505	148,784	1913....	1,006,149	36,354	1,042,503
1905....	394,055	9,394	403,449	1914....	724,596	18,756	743,352
1906....	555,913	14,976	570,889	1915....	873,265	39,490	912,755
1907....	629,026	17,728	646,754	1916....	1,255,196	31,313	1,286,509
1908....	500,300	9,657	509,957	1917....	1,513,256	49,033	1,562,289
1909....	664,789	13,962	678,751	1918....	1,622,122	72,855	1,694,977
1910....	723,002	18,922	741,924	1919....	891,309	36,332	927,641
1911....	768,559	22,312	790,871	1920....	1,048,089	61,833	1,109,922
1912....	820,792	32,239	853,031	.....	.....	.....	.....

PRODUCTION OF STEEL INGOTS AND CASTINGS BY PROCESSES.

Years.	Open-hearth.	Bessemer.	Other kinds.	Total.
1906.....	347,778	219,791	3,320	570,889
1907.....	440,936	202,268	3,550	646,754
1908.....	401,119	108,433	405	509,957
1909.....	496,142	182,304	305	678,751
1910.....	542,354	199,570	...	741,924
1911.....	601,074	189,797	...	790,871
1912.....	645,062	207,569	400	853,031
1913.....	768,663	273,391	449	1,042,503
1914.....	556,910	186,158	284	743,352
1915.....	884,736	22,521	5,498	912,755
1916.....	1,245,488	10,968	30,053	1,286,509
1917.....	1,517,698	7,168	37,423	1,562,289
1918.....	1,579,927	7,674	107,376	1,694,977
1919.....	902,628	6,007	19,006	927,641
1920.....	1,067,768	10,623	31,531	1,109,922

In 1920, 28 works made steel ingots or castings, against 27 works in 1919. Thirteen works made ingots and 24 made castings. Ten plants made open-hearth, 9 made Bessemer, 1 made crucible, and 13 made electric steel ingots or castings.

FINISHED ROLLED IRON AND STEEL.

PRODUCTION OF FINISHED ROLLED PRODUCTS, 1895-1909.

Years.	Gross tons.	Years.	Gross tons.	Years.	Gross tons.
1895.....	66,402	1900.....	100,690	1905.....	385,826
1896.....	75,043	1901.....	112,007	1906.....	571,742
1897.....	77,021	1902.....	161,485	1907.....	600,179
1898.....	90,303	1903.....	129,516	1908.....	496,517
1899.....	110,642	1904.....	180,038	1909.....	662,741

PRODUCTION OF FINISHED ROLLED FORMS, SHOWING IRON AND STEEL SEPARATELY, GROSS TONS, 1906-1920.

Years.	Iron.	Steel.	Total.	Years.	Iron.	Steel.	Total.
1906...	78,898	492,844	571,742	1914...	47,309	612,210	659,519
1907...	81,093	519,086	600,179	1915...	40,797	612,521	653,318
1908...	65,505	431,012	496,517	1916...	76,478	887,332	963,810
1909...	79,636	583,105	662,741	1917...	101,795	874,403	976,198
1910...	83,918	655,893	739,811	1918...	96,296	905,012	1,001,308
1911...	86,383	695,541	781,924	1919...	59,410	683,589	742,999
1912...	109,012	752,212	861,224	1920...	67,800	864,106	931,906
1913...	95,881	871,216	967,097	.....	.....	.....	.....

PRODUCTION OF FINISHED ROLLED FORMS BY LEADING PRODUCTS.

Products.	1916.	1917.	1918.	1919.	1920.
Rails.....	81,497	41,349	145,309	282,415	227,967
Structural shapes and wire rods..	174,490	189,687	141,978	163,489	246,582
Plates and sheets, nail plate, merchant bars, tie-plate bars, etc..	707,823	745,162	714,021	297,095	457,357
Total.....Gross tons.	963,810	976,198	1,001,308	742,999	931,906

In 1920, 23 works rolled finished forms of iron or steel.

PRODUCTION OF STEEL RAILS, 1901-1920.

Years.	Gross tons.	Years.	Gross tons.	Years.	Gross tons.	Years.	Gross tons.
1901...	891	1906...	312,877	1911.	360,547	1916.	81,497
1902...	33,950	1907...	311,461	1912.	423,885	1917.	41,349
1903...	1,243	1908...	268,692	1913.	506,709	1918.	145,309
1904...	36,216	1909...	344,830	1914.	382,344	1919.	282,415
1905...	178,885	1910...	366,465	1915.	209,752	1920.	227,967

Of the total production of rails in 1920, 7,910 tons weighed less than 50 pounds per yard, 13,913 tons weighed over 50 but less than 85 pounds, 180,794 tons weighed 85 but less than 100 pounds, and 25,350 tons weighed 100 pounds and over per yard.

MISCELLANEOUS IRON AND STEEL STATISTICS.

PRODUCTION OF CUT AND WIRE NAILS.

We estimate the total production of iron and steel cut and wire nails in Canada in 1920 as amounting to 1,868,000 kegs of 100 pounds, as compared with an estimated production of 1,447,000 kegs in 1919, 1,609,000 kegs in 1918, 1,822,000 kegs in 1917, 1,757,000 kegs in 1916, and 1,636,000 kegs in 1915.

Cut or wire nails were made by 19 works in 5 Provinces in 1920. Fourteen works made wire nails but not cut nails, 2 made cut but not wire nails, and 3 made both cut and wire nails. In 1919, 20 works in 5 Provinces made cut or wire nails.

PRODUCTION OF FINISHED ANGLE SPLICE BARS, ETC.

The production of finished angle splice bars, tie plates, fish plates, and other rail joints and fastenings in Canada by rolling mills and steel works in 1920, all steel, not including spikes, bolts, nuts, and similar fastenings, amounted to 34,838 gross tons, against 36,478 tons in 1919, 17,195 tons in 1918, 8,472 tons in 1917, 6,479 tons in 1916, and 9,406 tons in 1915.

PRODUCTION OF FORGED IRON AND STEEL BY ROLLING MILLS AND STEEL WORKS, 1911-1920.

Years.	Production—Gross tons.			Years.	Production—Gross tons.		
	Iron.	Steel.	Total.		Iron.	Steel.	Total.
1911..	787	18,045	18,832	1916..	854	142,554	143,408
1912..	867	21,548	22,415	1917..	1,287	189,158	190,445
1913..	2,578	20,827	23,405	1918..	3,022	321,081	324,103
1914..	1,792	6,346	8,138	1919..	2,010	13,795	15,805
1915..	323	21,775	22,098	1920..	3,018	25,771	28,789

PRODUCTION OF WROUGHT IRON AND STEEL PIPE.

In 1920 Canada made 79,808 gross tons of wrought iron and steel pipe, against 62,670 tons in 1919, 54,712 tons in 1918, 52,235 tons in 1917, and 90,537 tons in 1916.

PRODUCTION OF CAST IRON PIPE.

We estimate the total production of cast iron gas and water pipe and fittings and cast iron soil and plumbers' pipe and fittings in Canada in 1920 as amounting to 59,850 net tons of 2,000 pounds, as compared with an estimated production of 37,530 tons in 1919, 20,150 tons in 1918, 26,970 tons in 1917, 43,850 tons in 1916, and 53,700 tons in 1915.

PRODUCTION OF COAL, COKE, IRON ORE, ETC.

PRODUCTION, IMPORTS, AND EXPORTS OF COAL, NET TONS.

Cal- endar years.	Produc- tion.	Imports.	*Exports.	Calendar years.	Produc- tion.	Imports.	*Exports.
1905...	8,667,948	7,430,672	1,635,287	1913...	15,012,178	18,201,953	1,562,020
1906...	9,762,601	7,443,664	1,835,041	1914...	13,637,529	14,721,057	1,423,126
1907...	10,511,426	10,651,281	1,894,074	1915...	13,267,023	12,465,902	1,766,543
1908...	10,886,311	10,297,425	1,729,833	1916...	14,483,395	17,580,603	2,135,359
1909...	10,501,475	9,872,924	1,588,099	1917...	14,046,759	20,857,460	1,733,156
1910...	12,909,152	10,597,982	2,377,049	1918...	14,977,926	21,678,587	1,817,195
1911...	11,323,388	14,558,892	1,500,639	1919...	13,681,218	17,308,837	2,070,050
1912...	14,512,829	14,595,810	2,127,133	1920...	16,631,954	18,742,542	2,558,174

*Exports of Canadian coal only.

PRODUCTION, IMPORTS, AND EXPORTS OF COKE, NET TONS.

Cal- endar years.	Produc- tion.	*Imports.	Exports.	Calendar years.	Produc- tion.	*Imports.	Exports.
1905...	700,488	371,593	116,071	1913...	1,517,133	723,906	68,235
1906...	782,055	480,222	37,003	1914...	1,015,253	553,046	67,838
1907...	842,003	†400,536	70,617	1915...	1,200,766	637,857	35,869
1908...	858,257	619,269	58,708	1916...	1,448,782	757,116	48,539
1909...	862,011	661,425	74,067	1917...	1,231,865	970,106	23,595
1910...	902,715	737,088	57,971	1918...	1,258,284	1,165,590	29,612
1911...	935,651	751,389	9,852	1919...	1,160,470	383,374	14,709
1912...	1,406,028	628,174	57,744	1920...	1,306,644	586,406	39,536

*Fiscal years from 1905 to 1908; calendar years from 1909 to 1920. †For 9 months only.

SHIPMENTS, IMPORTS, AND EXPORTS OF IRON ORE, NET TONS.

Cal- endar years.	Ship- ments.	*Imported ore consumed.	Exports.	Calendar years.	Ship- ments.	*Imported ore consumed.	Exports.
1905...	291,097	861,847	†	1913...	307,634	2,110,828	126,124
1906...	248,831	982,740	74,778	1914...	244,854	1,324,326	135,451
1907...	312,856	1,117,260	25,901	1915...	398,112	1,463,488	79,770
1908...	238,082	1,051,445	‡	1916...	275,176	1,964,598	161,260
1909...	268,043	1,235,000	21,956	1917...	215,302	2,084,231	164,004
1910...	259,418	1,377,035	114,499	1918...	211,608	2,146,995	130,250
1911...	210,344	1,628,368	37,686	1919...	197,170	1,674,194	14,480
1912...	215,883	2,019,165	118,129	1920...	129,072	1,957,738	19,879

*Imported iron ore consumed by Canadian blast furnaces.

‡Not available.

†Exports for this year, though available, are incorrect, owing to duplication of entries.

In 1920 the imports of pig iron, ferro-manganese, etc., into Canada amounted to 65,391 net tons, against 40,184 tons in 1919. The exports in 1920 amounted to 128,050 net tons, against 86,054 tons in 1919.

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